

May 4, 2004

State of Utah
Division of Oil, Gas & Mining
Attn: Diana Whitney
1594 West North Temple - Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801

RE: Applications for Permit to Drill: Federal (1-13-9-17) 3-13-9-17, 5-13-9-17, 7-13-9-17, 9-13-9-17, 11-13-9-17, 13-13-9-17, and 15-13-9-17.

#### Dear Diana:

Enclosed find APD's on the above referenced wells. The 5-13-9-17 is an Exception Location. I have notified our office in Denver and they will be sending you the appropriate paperwork. If you have any questions, feel free to give either Brad or myself a call.

Sincerely,

Mandie Crozier

Regulatory Specialist

mc

enclosures

RECEIVED

MAY 0 5 2004

DIV. OF OIL, GAS & MINING

Form 3160-3 (September 2001)				C	FORM APPROVI DMB No. 1004-01 pires January 31,	136	
UNITED STATES  DEPARTMENT OF THE INTERIOR  BUREAU OF LAND MANAGEMENT  APPLICATION FOR PERMIT TO DRILL OR REENTER					ial No.		
					U-39713		
					Allottee or Trib	e Name	
					N/A		
la. Type of Work: DRILL REENTE	R	· · · · · · · · · · · · · · · · · · ·		7. If Unit or C	A Agreement,	Name and No.	
				Tom Eight min Frest			
lb. Type of Well: 🖾 Oil Well 🚨 Gas Well 🖵 Other		Single Zone 📮 Multip	nla Zona	8. Lease Name and Well No.			
2. Name of Operator		Single Zolle 🕒 Multi	pie Zone		al 1-13-9-17		
Inland Production Company				9. API Well N	43.0	47-35704	
3a. Address		No. (include area code)		10. Field and P	•	tory	
Route #3 Box 3630, Myton UT 84052	, , ,	46-3721			nent Butte		
4. Location of Well (Report location clearly and in accordance with				11. Sec., T., R.,	, M., or Blk. and	d Survey or Area	
At surface NE/NE 660' FNL 660' FEL 589815 X	•	0.03437		NE/NE	Sec. 13, T9S	R17F	
At proposed prod. zone 773 2119	Y -/-	09, 94728					
14. Distance in miles and direction from nearest town or post office*				12. County or I	Parish	13. State	
Approximatley 17.1 miles southeast of Myton, Utah	1			Uintah		UT	
15. Distance from proposed* location to nearest	16. No. of	Acres in lease	17. Spacin	ng Unit dedicated to this well			
property or lease line, ft. (Also to nearest drig, unit line, if any) Approx. 660' f/lse, NA f/unit	1	,120.00		40 Acres			
18. Distance from proposed location*	19. Propos	sed Depth	20. BLM/I	BIA Bond No. on file			
to nearest well, drilling, completed, applied for, on this lease, ft. Approx. 2640'		500'	#4	4488944			
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Appro	ximate date work will sta	rt*	23. Estimated	duration		
5105' GL	4 th 0	Quarter 2004		Approximately seve	n (7) days from spud	to rig release.	
	24. Att	achments					
The following, completed in accordance with the requirements of Onsho	re Oil and Ga	s Order No.1, shall be at	ached to this	form:		···	
<ol> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> <li>A Surface Use Plan (if the location is on National Forest System SUPO shall be filed with the appropriate Forest Service Office).</li> </ol>	Lands, the	4. Bond to cover the stem 20 above). 5. Operator certific 6. Such other site authorized office.	ation. specific info			,	
25. Signature	Nam	e (Printed/Typed)	1		, Date		
Title Regulatory Specialist	Ma	andie Crozier				4/64	
Approved by (Signature)	Nam	PRINCIPAL ENTAINED LEVEL PRINCIPAL ENTAINED LE	G. HI		Date	 5 - 24-04	
THE	Offi	ENVIRONMENTA	a se inita	194 Hi		-	
Application approval does not warrant or certify the the applicant holds loperations thereon.  Conditions of approval, if any, are attached.	egal or equita	ble title to those rights in	the subject l	ease which woul	d entitle the app	olicant to conduct	
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it States any false, fictitious or fraudulent statements or representations as t	a crime for a	any person knowingly an within its jurisdiction.	d willfully to	o make to any de	partment or ag	ency of the United	
*(Instructions on reverse)	T. The Addition		A	* ** **********************************			

# T9S, R17E, S. B.&M.

N89\*59'W - 80.04 (C 9.) 2640.60' (Measured) Brass Cap N89'47'39"W - 2647.07' (Meas.) N89'59'W G.L.O. (Basis of Bearings) 1910 1910 Brass Cap Bross Cap 660' DRILLING WINDOW WELL LOCATION: FEDERAL 1-13-9-17 ELEV. UNGRADED GROU'D = 5104.7' (G.L.O.) 1910 Brass Cap W.10.0N Proportioned (Not Set) 1910 Brass Cap Brass Cap N89'58'06"W - 2641.49' (Meas.) 1910 N89'55 30"W - 2639.18' (Meas.)

**♦** 

Brass Cap

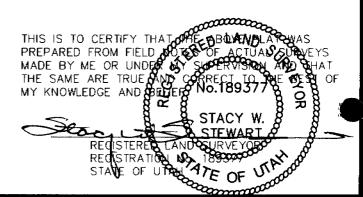
= SECTION CORNERS LOCATED

BASIS OF ELEV; U.S.G.S. 7-1/2 min QU (PARIETTE DRAW SW)

WEST - 80.06 (G.L.O.)

#### INLAND PRODUCTION COMPANY

WELL LOCATION, FEDERAL 1-13-9-17, LOCATED AS SHOWN IN THE NE 1/4 NE 1/4 OF SECTION 13, T9S, R17E, S.L.B.&M. UINTAH COUNTY, UTAH.



#### TRI STATE LAND SURVEYING & CONSULTING

180 NORTH VERNAL AVE. - VERNAL, UTAH 84078 (435) 781-2501

SCALE: 1" = 1000'	SURVEYED BY: D.J.S.
DATE: 9- :- 03	DRAWN BY: J.R.S.
NOTES:	FILE #

Well No.: Federal 1-13-9-17

# CONDITIONS OF APPROVAL APPLICATION FOR PERMIT TO DRILL

Company/Operator: Inland Production Company

Well Name & Number: Federal 1-13-9-17

API Number:

Lease Number: U-39713

Location: NE/NE Sec. 13, T9S R17E

# SURFACE USE PROGRAM CONDITIONS OF APPROVAL

#### **CULTURAL RESOURCES**

See DIAMOND MOUNTAIN RESOURCE AREA RESOURCE MANAGEMENT PLAN AND RECORD OF DECISION (Fall 1994).

#### PALEONTOLOGICAL RESOURCES

See DIAMOND MOUNTAIN RESOURCE AREA RESOURCE MANAGEMENT PLAN AND RECORD OF DECISION (Fall 1994).

#### SOILS, WATERSHEDS, AND FLOODPLAINS

See DIAMOND MOUNTAIN RESOURCE AREA RESOURCE MANAGEMENT PLAN AND RECORD OF DECISION (Fall 1994).

#### WILDLIFE AND FISHERIES

See DIAMOND MOUNTAIN RESOURCE AREA RESOURCE MANAGEMENT PLAN AND RECORD OF DECISION (Fall 1994).

#### THREATENED, ENDANGERED, AND OTHER SENSITIVE SPECIES

MOUNTAIN PLOVER: If new construction or surface disturbing activities are scheduled to occur between May 1 and June 15, detailed surveys of the area within 0.5 mile of the proposed location and within 300 feet of proposed access routes must be conducted to detect the presence of mountain plovers. All surveys must be conducted in accordance with the survey protocols outlined in the most recent USFWS Survey Protocol. Surveys must be completed prior to initiating new construction or surface disturbing activities. No new construction or surface disturbing activities will be allowed between March 15 and August 15 within a 0.5 mile radius of any documented mountain plover nest site.

BURROWING OWL: Due to the proximity of the location to active prairie dog towns, there is the potential to encounter nesting burrowing owls between April 1 and August 15. If new construction or surface disturbing activities are scheduled

between April 1 and August 15, pre-construction surveys will be conducted to detect the presence of nesting burrowing owls within 0.5 mile of any new construction or surface disturbing activity (see Vernal BLM Field Office Protocol). No new construction or surface disturbing activities will be allowed between April 1 and August 15 within a 0.5 mile radius of any active burrowing owl nest.

#### INLAND PRODUCTION COMPANY FEDERAL #1-13-9-17 NE/NE SECTION 13, T9S, R17E UINTAH COUNTY, UTAH

#### ONSHORE ORDER NO. 1

#### **DRILLING PROGRAM**

#### 1. <u>GEOLOGIC SURFACE FORMATION:</u>

Uinta formation of Upper Eocene Age

#### 2. ESTIMATED TOPS OF IMPORTANT GEOLOGIC MARKERS:

 Uinta
 0' – 1640'

 Green River
 1640'

 Wasatch
 5800'

#### 3. <u>ESTIMATED DEPTHS OF ANTICIPATED WATER, OIL, GAS OR MINERALS:</u>

Green River Formation 1640' - 6500' - Oil

#### 4. PROPOSED CASING PROGRAM

Please refer to the Monument Butte Field Standard Operation Procedure (SOP).

#### 5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:

Please refer to the Monument Butte Field SOP. See Exhibit "C".

#### 6. <u>TYPE AND CHARACTERISTICS OF THE PROPOSED CIRCULATION MUDS:</u>

Please refer to the Monument Butte Field SOP.

#### 7. AUXILIARY SAFETY EQUIPMENT TO BE USED:

Please refer to the Monument Butte Field SOP.

#### 8. TESTING, LOGGING AND CORING PROGRAMS:

Please refer to the Monument Butte Field SOP.

#### 9. <u>ANTICIPATED ABNORMAL PRESSURE OR TEMPERATURE:</u>

The anticipated maximum bottom hole pressure is 2000 psi. It is not anticipated that abnormal temperatures will be encountered.

#### 10. ANTICIPATED STARTING DATE AND DURATION OF THE OPERATIONS:

Please refer to the Monument Butte Field SOP.

#### INLAND PRODUCTION COMPANY FEDERAL #1-13-9-17 NE/NE SECTION 13, T9S, R17E UINTAH COUNTY, UTAH

#### ONSHORE ORDER NO. 1

#### MULTI-POINT SURFACE USE & OPERATIONS PLAN

#### 1. EXISTING ROADS

See attached Topographic Map "A"

To reach Inland Production Company well location site Federal #1-13-9-17 located in the NE 1/4 NE 1/4 Section 13, T9S, R17E, Uintah County, Utah:

Proceed southwesterly out of Myton, Utah along Highway 40 - 1.6 miles  $\pm$  to the junction of this highway and UT State Hwy 53; proceed southeasterly along Hwy 53 - 11.7 miles  $\pm$  to it's junction with an existing road to the southeast; proceed southeasterly - 2.9 miles  $\pm$  to it's junction with and existing road to the southeast; proceed southeasterly - 0.7 miles  $\pm$  to it's junction with an existing road to the northeast; proceed northeasterly - 0.2 miles  $\pm$  to it's junction with the beginning of the proposed access road; proceed southeasterly along the proposed access road 1,155'  $\pm$  to the proposed well location.

#### 2. PLANNED ACCESS ROAD

See Topographic Map "B" for the location of the proposed access road.

#### 3. LOCATION OF EXISTING WELLS

Refer to Exhibit "B".

#### 4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES

Please refer to the Monument Butte Field Standard Operating Procedure (SOP).

#### 5. LOCATION AND TYPE OF WATER SUPPLY

Please refer to the Monument Butte Field SOP. See Exhibit "A".

#### 6. SOURCE OF CONSTRUCTION MATERIALS

Please refer to the Monument Butte Field SOP.

#### 7. METHODS FOR HANDLING WASTE DISPOSAL

Please refer to the Monument Butte Field SOP.

#### 8. ANCILLARY FACILITIES

Please refer to the Monument Butte Field SOP.

#### 9. WELL SITE LAYOUT

See attached Location Layout Diagram.

#### 10. PLANS FOR RESTORATION OF SURFACE

Please refer to the Monument Butte Field SOP.

#### 11. SURFACE OWNERSHIP - Bureau Of Land Management

#### 12. OTHER ADDITIONAL INFORMATION

The Archaeological Resource Survey and Paleontological Resource Survey for this area are attached. MOAC Report #03-82, 1/12/04. Paleontological Resource Survey prepared by, Wade E. Miller, 7/28/03. See attached report cover pages, Exhibit "D".

Inland Production Company requests 50' of disturbed area be granted for the Federal #1-13-9-17 to allow for construction of a 6" gas gathering line, and a 3" poly fuel gas line. Both lines will tie in to the existing pipeline infrastructure. Refer to Topographic Map "C." For a ROW plan of development, please refer to the Monument Butte Field SOP.

Inland Production Company also requests 50' of disturbed area be granted for the Federal #1-13-9-17 to allow for construction of a 3" steel water injection line and a 3" poly water return line.

Refer to Topographic Map "C." For a ROW plan of development, please refer to the Monument Butte Field SOP.

#### Water Disposal

Immediately upon first production, all produced water will be confined to a steel storage tank. If the production water meets quality guidelines, it is transported to the Ashley, Monument Butte, Jonah, and Beluga water injection facilities by company or contract trucks. Subsequently, the produced water is injected into approved Class II wells to enhance Inland's secondary recovery project.

Water not meeting quality criteria, is disposed at Inland's Pariette #4 disposal well (Sec. 7, T9S R19E) or at State of Utah approved surface disposal facilities.

#### Reserve Pit Liner

Please refer to the Monument Butte Field SOP.

#### **Location and Reserve Pit Reclamation**

Please refer to the Monument Butte Field SOP.

The following seed mixture will be used on the topsoil stockpile, the recontoured surface of the reserve pit, and for final reclamation: (All poundages are in pure live seed)

ShadscaleAtriplex confertifolia4 lbs/acreGalleta GrassHilaria jamesii4 lbs/acreScarlet GlobemallowSphaeralcea conccinea4 lbs/acre

#### **Details of the On-Site Inspection**

The proposed Federal #1-13-9-17 was on-sited on 7/23/03. The following were present; Jon Holst (permitting agent), Brad Mecham (Inland Production), Byron Tolman (Bureau of Land Management), and a SWCA representative. Weather conditions were clear @ 80 degrees.

#### 13. LESSEE'S OR OPERATORS REPRESENTATIVE AND CERTIFICATION

Representative

Name: Brad Mecham

Address:

Route #3 Box 3630

Myton, UT 84052

Telephone:

(435) 646-3721

#### Certification

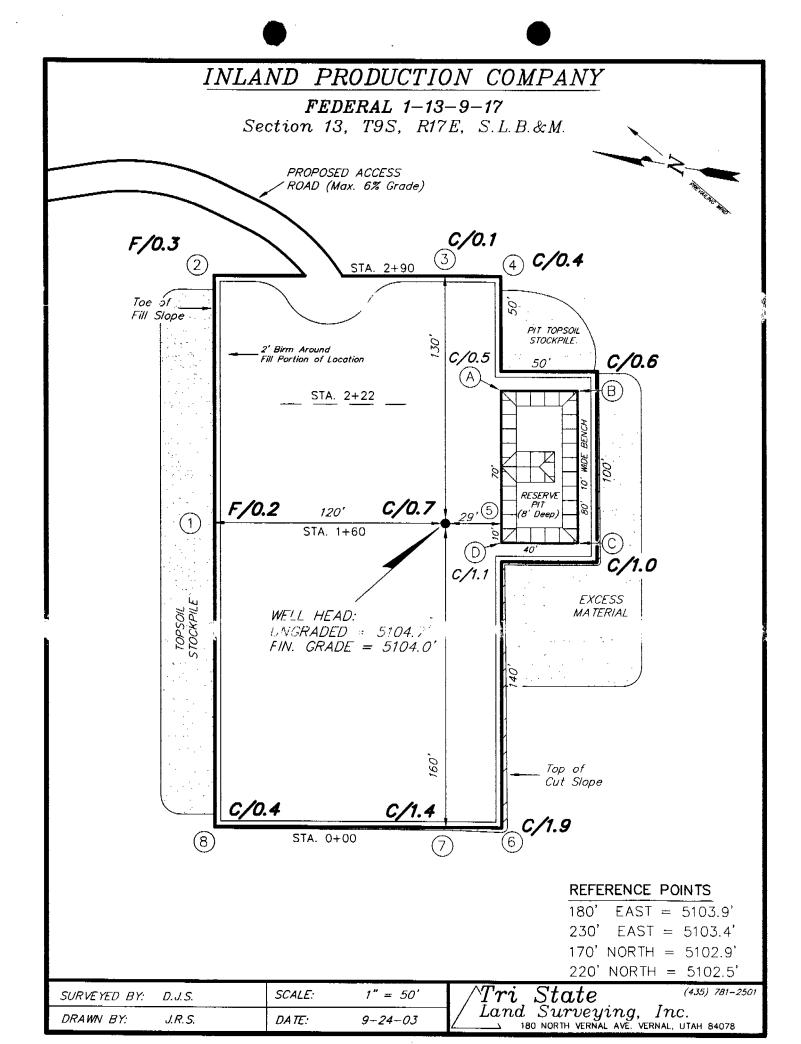
Please be advised that INLAND PRODUCTION COMPANY is considered to be the operator of well #1-13-9-17 NE/NE Section 13, Township 9S, Range 17E: Lease U-39713 Uintah County, Utah: and is responsible under the terms and conditions of the lease for the operations conducted upon the leased lands. Bond coverage is provided by Hartford Accident #4488944.

I hereby certify that the proposed drillsite and access route have been inspected, and I am familiar with the conditions which currently exist; that the statements made in this plan are true and correct to the best of my knowledge; and that the work associated with the operations proposed here will be performed by Inland Production Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Mandie Crozier

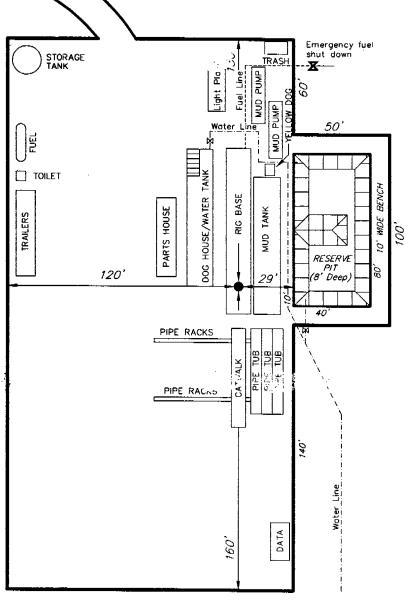
Mandie Crozier

Regulatory Specialist

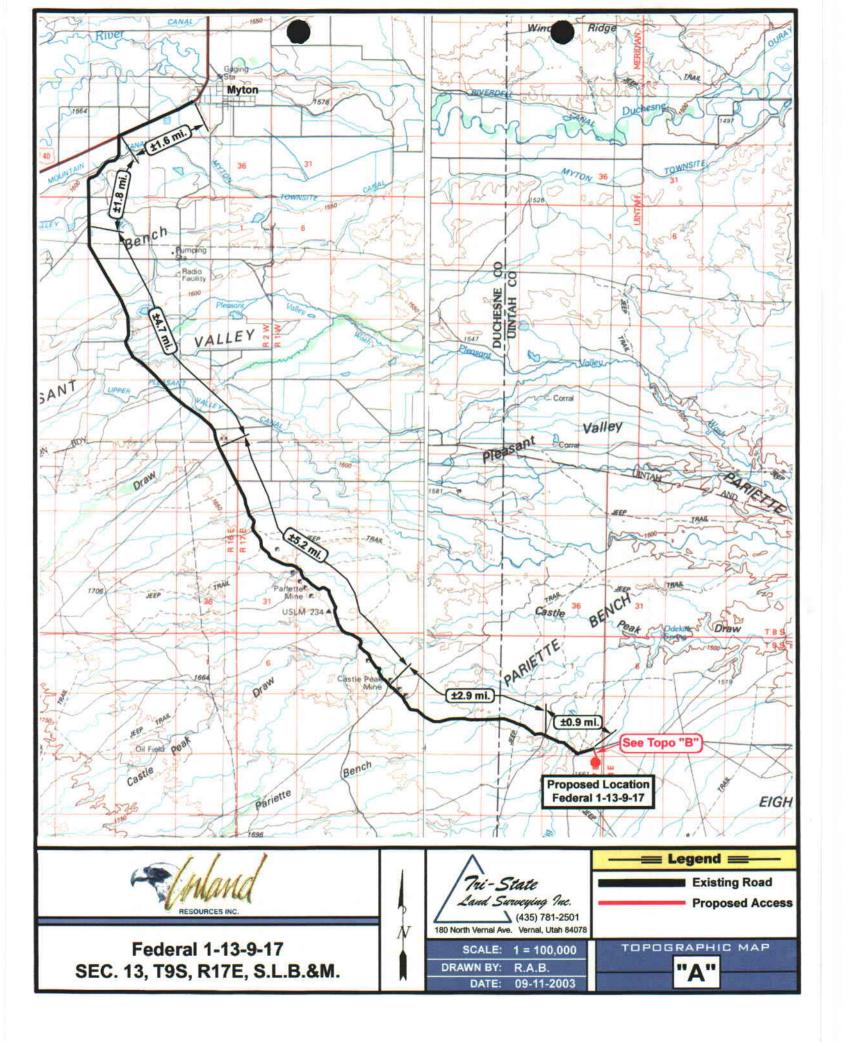


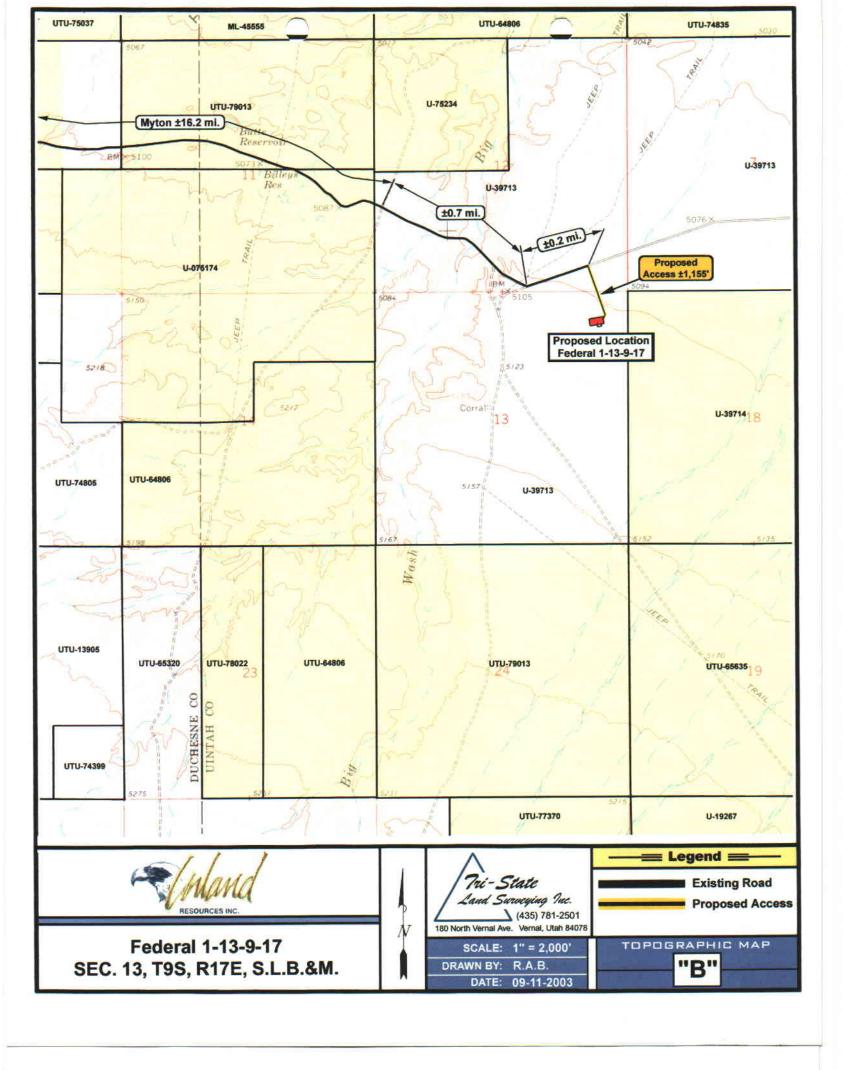
#### INLAND PRODUCTION COMPANY CROSS SECTIONS FEDERAL 1-13-9-17 20, Н STA. 2+90 20, П STA. 2+22 1" = 50'EXISTING FINISHED GRADE GRADE 20, WELL HOLE 11 1" = 50'STA. 1+60 20, H 1" = 50'STA. 0+00 ESTIMATED EARTHWORK QUANTITIES (No Shrink or swell adjustments have been used) (Expressed in Cubic Yards) ITEM CUT FILL 6" TOPSOIL **E**XCESS PAD 350 350 Topsoil is NOTE: not included in Pad Cut UNLESS OTHERWISE NOTED PIT 640 640 ALL CUT/FILL SLOPES ARE TOTALS 890 640 AT 1.5:1 Tri~State (435) 781-. Land~Surveying,~Inc. $\_$ 180 NORTH VERNAL AVE. VERNAL, UTAH 84078 (435) 781-2501 SCALE: 1" = 50'SURVEYED BY: D.J.S. DRAWN BY: J.R.S. DATE: 9-24-03

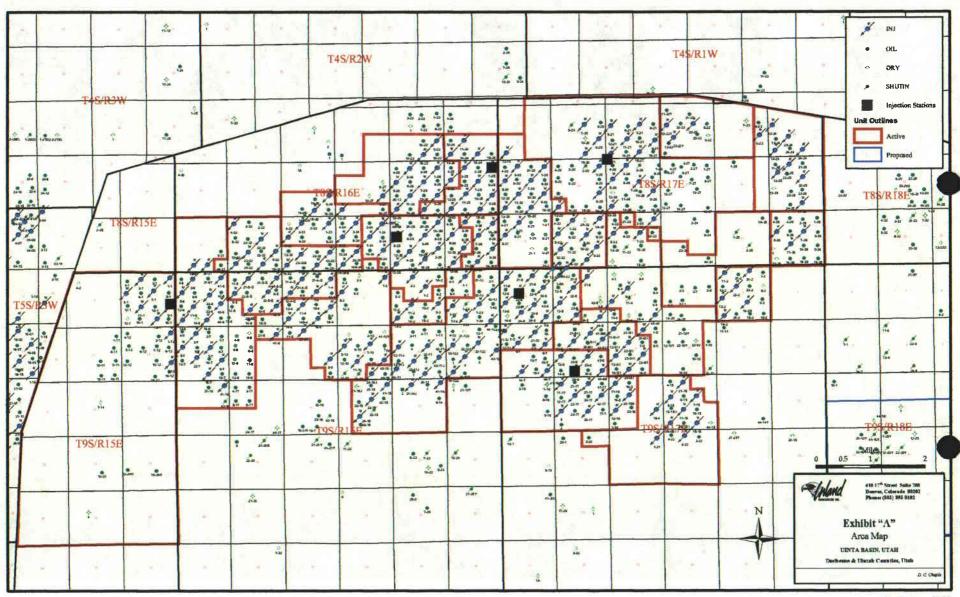
# INLAND PRODUCTION COMPANY TYPICAL RIG LAYOUT FEDERAL 1-13-9-17 PROPOSED ACCESS ROAD (Max. 6% Grade) STORAGE TANK Emergency fuel shut down



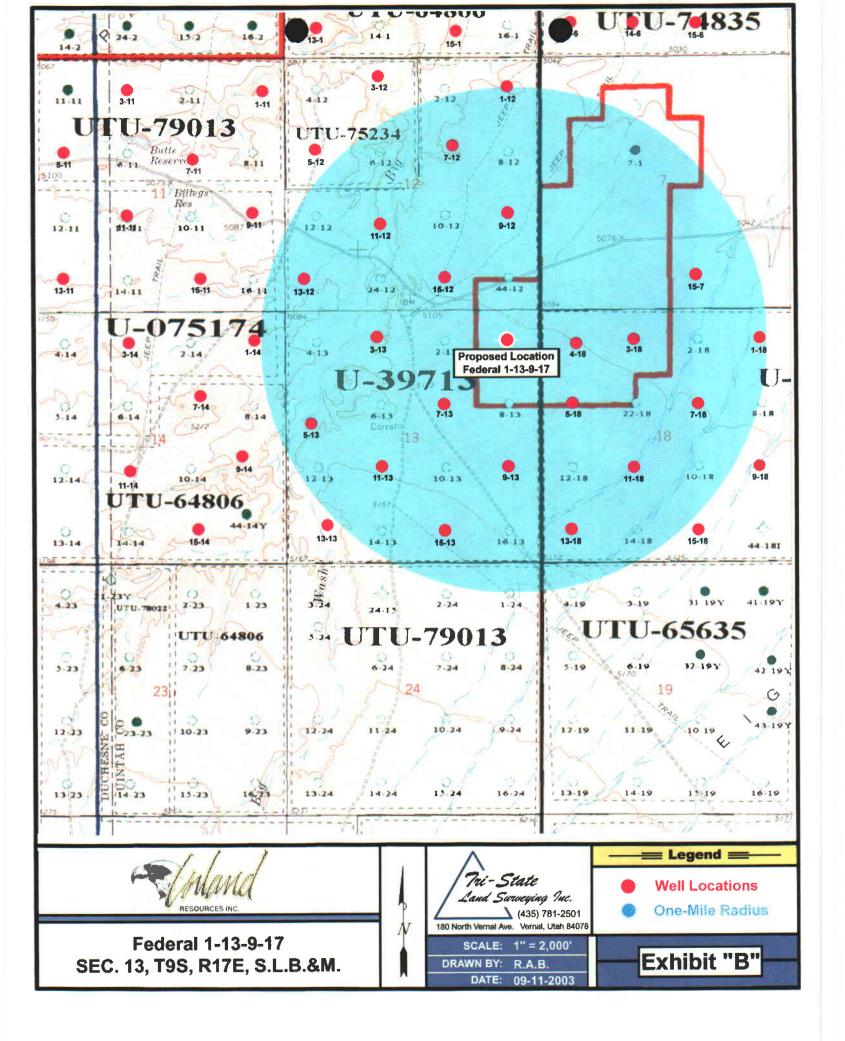
SURVEYED BY: D.J.S.	SCALE:	1" = 50'	\(\frac{Tri}{State}\) \(State\) (435) 781-2501
DRAWN BY: J.R.S.	DATE:	9-24-03	/ Land Surveying, Inc.

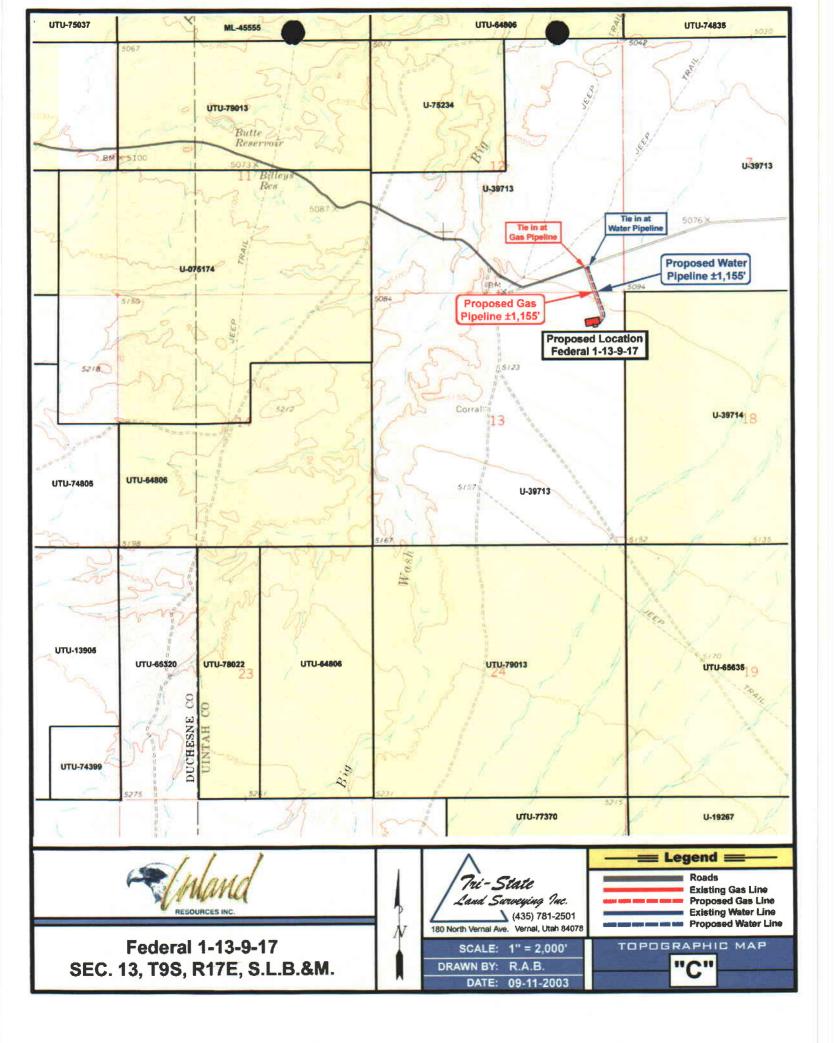






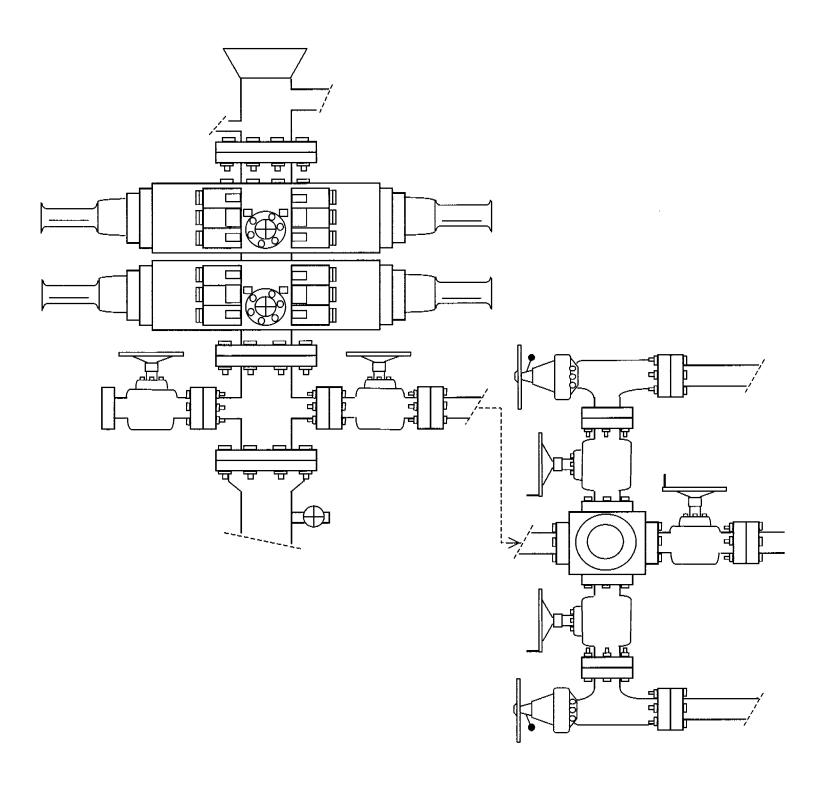
January 15, 2003





## 2-M SYSTEM

Blowout Prevention Equipment Systems



**EXHIBIT C** 

● Exhibit "D"

Page 1 of 4

CULTURAL RESOURCE INVENTORY OF INLAND PRODUCTIONS' PARCEL IN T 9 S, R17 E, SEC. 13, 14, 15, 23, & 24 AND T 9 S, R 18 E, SEC. 18 & 19, DUCHESNE AND UINTAH COUNTIES, UTAH

BY:

Katie Simon and Keith R. Montgomery

Prepared For:

Bureau of Land Management Vernal Field Office

Prepared Under Contract With:

Inland Production 2507 Flintridge Place Fort Collins, CO 80521

Prepared By:

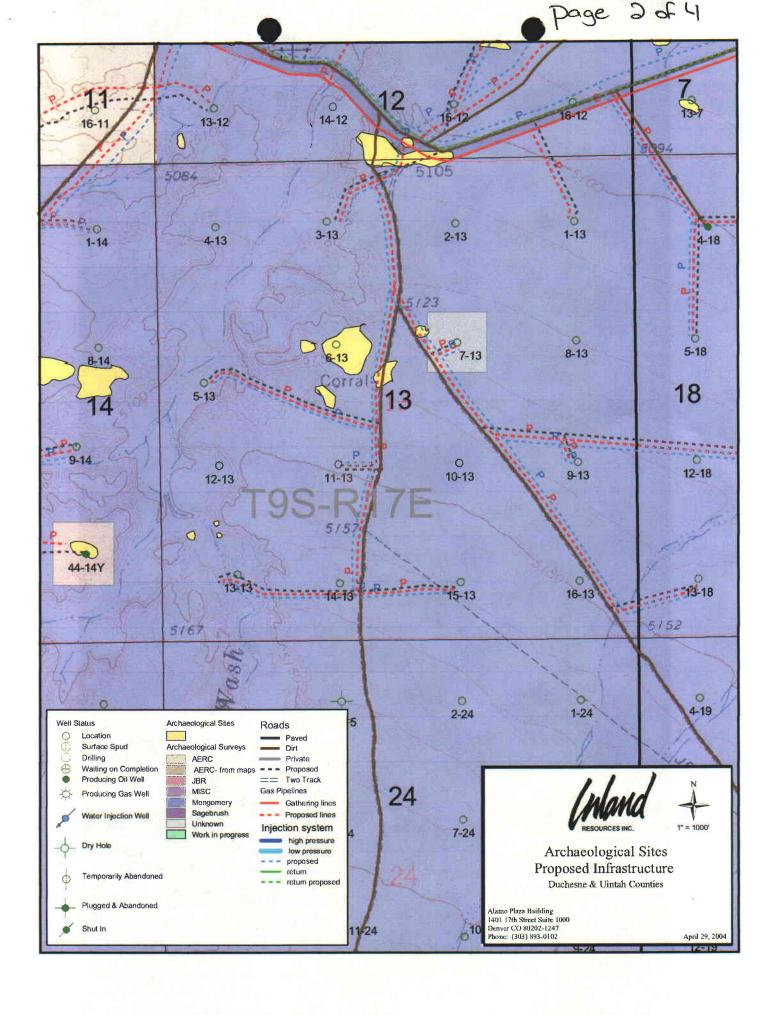
Montgomery Archaeological Consultants P.O. Box 147 Moab, Utah 84532

MOAC Report No. 03-82

January 12, 2004

United States Department of Interior (FLPMA)
Permit No. 03-UT-60122

State of Utah Antiquities Project (Survey)
Permit No. U-03-MQ-0750b



page 3 of 4

## INLAND RESOURCES, INC.

# PALEONTOLOGICAL FIELD SURVEY OF PROPOSED PRODUCTION DEVELOPMENT AREAS, DUCHESNE AND UINTAH COUNTIES, UTAH

(Section 35, T 8 S, R 17 E; Sections 13, 14, 23, 24, T 9 S, R 17 E; NE 1/4, NE 1/4, Section 15, T 9 S, R 17 E; Sections 18, 19, T 9 S, R 18 E; Sections 2, 3, 10 and western half of Section 11, T 9 S, R 15 E)

1217

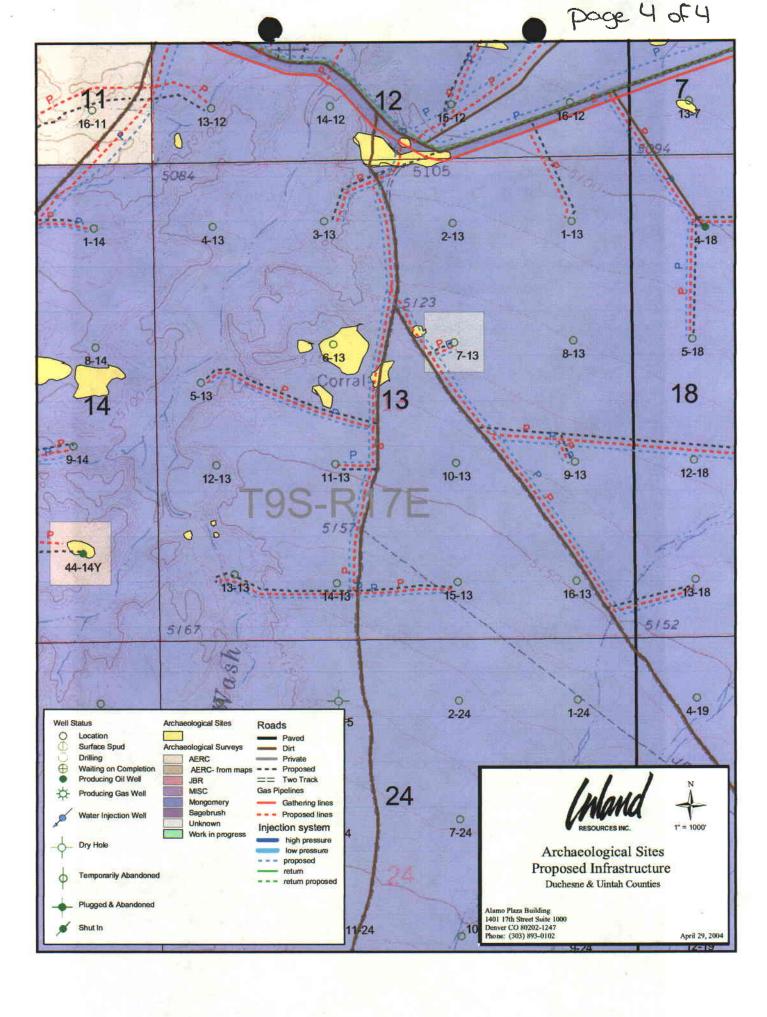
#### REPORT OF SURVEY

Prepared for:

Inland Resources, Inc.

Prepared by:

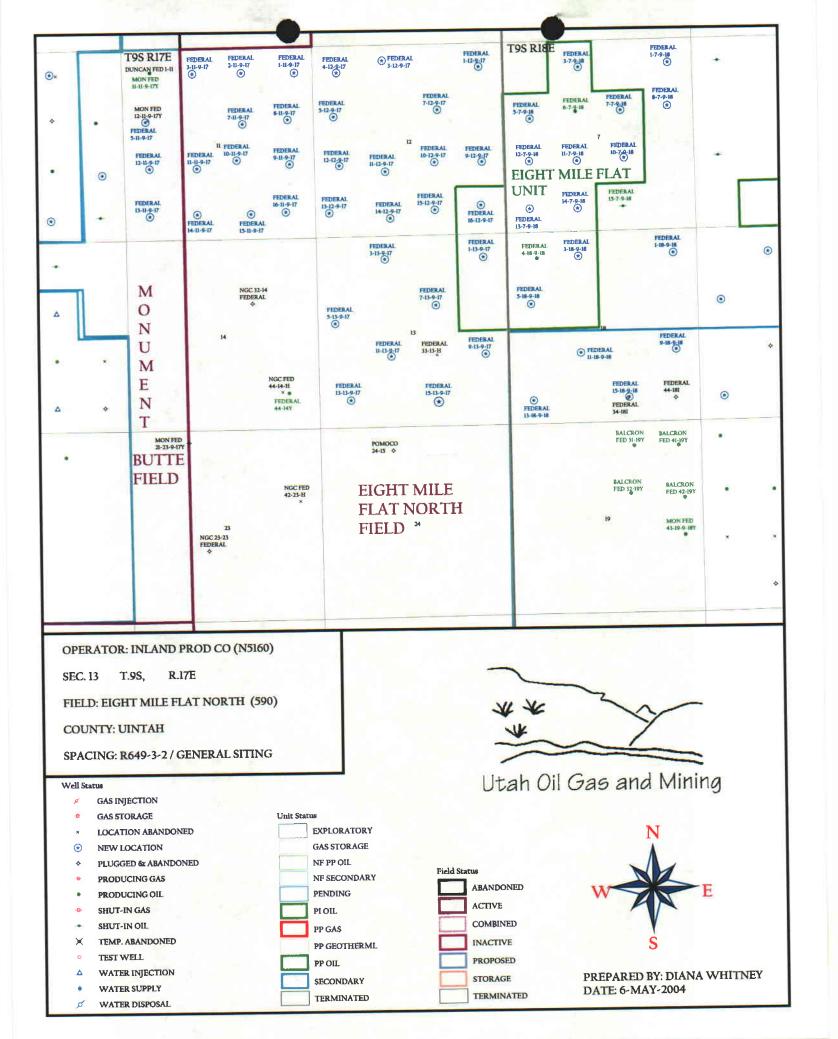
Wade E. Miller Consulting Paleontologist July 28, 2003



#### WORKSHEET

#### APPLICATION FOR PERMIT TO DRILL

ADD DEGREE - 05 /05 /0004	
APD RECEIVED: 05/05/2004	API NO. ASSIGNED: 43-047-35704
WELL NAME: FEDERAL 1-13-9-17	
OPERATOR: INLAND PRODUCTION ( N5160 )	
CONTACT: MANDIE CROZIER	PHONE NUMBER: 435-646-3721
PROPOSED LOCATION:  NENE 13 090S 170E  SURFACE: 0660 FNL 0660 FEL  BOTTOM: 0660 FNL 0660 FEL  UINTAH  8 MILE FLAT NORTH ( 590 )  LEASE TYPE: 1 - Federal  LEASE NUMBER: U-39713  SURFACE OWNER: 1 - Federal  PROPOSED FORMATION: GRRV	INSPECT LOCATN BY: / /  Tech Review Initials Date  Engineering  Geology  Surface  LATITUDE: 40.03637
COALBED METHANE WELL? NO	LONGITUDE: 109.94728
RECEIVED AND/OR REVIEWED:  Plat  Bond: Fed[1] Ind[] Sta[] Fee[]  (No. 4488944 )  Potash (Y/N)  N Oil Shale 190-5 (B) or 190-3 or 190-13  Water Permit  (No. MUNICIPAL )  RDCC Review (Y/N)  (Date: )  N Fee Surf Agreement (Y/N)	LOCATION AND SITING:  R649-2-3.  Unit EIGHT MILE FLAT  R649-3-2. General Siting: 460 From Qtr/Qtr & 920 Between Wells  R649-3-3. Exception  Drilling Unit Board Cause No: Eff Date: Siting:  R649-3-11. Directional Drill
STIPULATIONS:  1- Cedent Of 2- Spacing Shi	prince





State of Utah

Department of Natural Resources

ROBERT L. MORGAN Executive Director

Division of Oil, Gas & Mining

LOWELL P. BRAXTON Division Director OLENE S. WALKER
Governor

GAYLE F. McKEACHNIE
Lieutenant Governor

May 24, 2004

Inland Production Company Rt. #3, Box 3630 Myton, UT 84052

Re: Federal 1-13-9-17 Well, 660' FNL, 660' FEL, NE NE, Sec. 13, T. 9 South, R. 17 East, Uintah County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann.§ 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-35704.

Sincerely,

for John R. Baza

pab Enclosures

cc: Uintah County Assessor

Bureau of Land Management, Vernal District Office



Operator:	Inland Production Company				
Well Name & Number	Federal	1-13-9-17			
API Number:	43-047-	35704			
Lease:	U-3971	3			
Location: <u>NE NE</u>	Sec. 13	T. 9 South	<b>R.</b> 17 East		

#### **Conditions of Approval**

#### 1. General

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

#### 2. Notification Requirements

Notify the Division within 24 hours of spudding the well.

Contact Carol Daniels at (801) 538-5284.

Notify the Division prior to commencing operations to plug and abandon the well.

Contact Dan Jarvis at (801) 538-5338

#### 3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

- 4. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.
- 5. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.

002

### **United States Department of the Interior**

#### **BUREAU OF LAND MANAGEMENT**

Utah State Office P.O. Box 45155 Salt Lake City, Utah 84145-0155

IN REPLY REFER TO: 3160 (UT-922)

May 24, 2004

Memorandum

To:

Assistant District Manager Minerals, Vernal District

From:

Michael Coulthard, Petroleum Engineer

Subject:

2004 Plan of Development Eight Mile Flat Unit, Uintah

County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following well is planned for calendar year 2004 within the Eight Mile Flat Unit, Uintah County, Utah.

API#

WELL NAME

LOCATION

(Proposed PZ Green River)

43-047-35704 Federal 1-13-9-17 Sec 13 T09S R17E 0660 FNL 0660 FEL

This office has no objection to permitting the well at this time.

/s/ Michael L. Coulthard

bcc: File - Eight Mile Flat Unit

Division of Oil Gas and Mining

Agr. Sec. Chron Fluid Chron

MCoulthard:mc:5-24-04



# United States Department of the Interior



#### BUREAU OF LAND MANAGEMENT Utah State Office P.O. Box 45155 Salt Lake City, UT 84145-0155 http://www.blm.gov

IN REPLY REFER TO: 3106 (UT-924)

September 16, 2004

Memorandum

To:

Vernal Field Office

From:

Acting Chief, Branch of Fluid Minerals

Subject:

Merger Approval

Attached is an approved copy of the name change recognized by the Utah State Office. We have updated our records to reflect the merger from Inland Production Company into Newfield Production Company on September 2, 2004.

Milas Lloadas

Michael Coulthard Acting Chief, Branch of Fluid Minerals

#### Enclosure

1. State of Texas Certificate of Registration

cc:

MMS, Reference Data Branch, James Sykes, PO Box 25165, Denver CO 80225 State of Utah, DOGM, Attn: Earlene Russell, PO Box 145801, SLC UT 84114

Teresa Thompson Joe Incardine

Connie Seare

•					•
UTSL-	15855	61052	73088	76561	•
071572A	16535	62848	73089	76787	
065914	16539	63073B	73520A	76808	
·	16544	63073D	74108	76813	
	17036	63073E	74805	76954	63073X
	17424	63073O	74806	76956	63098A
	18048	64917	74807	77233	68528A
UTU-	18399	64379	74808	77234	72086A
	19267	64380	74389	77235	72613A
02458	26026A	64381	74390	77337	72013A 73520X
03563	30096	64805	74391	77338	74477X
03563A	30103	64806	74392	77339	75023X
04493	31260	64917	74393	77357 <sup>-</sup>	76189X
05843	33992	65207	74398	77359	76331X
07978	34173	65210	74399	77365	76788X
09803	34346	65635	74400	77369	77098X
017439B	36442	65967	74404	77370	77107X
017985	36846	65969	74405	77546	77236X
017991	38411	65970	74406	77553·	77376X
017992	38428	66184	74411	77554	78560X
018073	38429	66185	74805	78022	79485X
019222	38431	66191	74806	79013	79641X
020252	39713	67168	74826	79014	80207X
020252A	39714	67170	74827	79015	81307X
020254	40026	67208	74835	79016	0100711
020255	40652	67549	74868	79017	
020309D	40894	67586	74869	79831	
022684A	41377	67845	74870	79832	·
027345	44210	68105	74872	79833 <sup>,</sup>	
034217A	44426	68548	74970	79831	
035521	44430	68618	75036	79834	
035521A	45431	69060	75037	80450	
038797	47171	69061	75038	80915	
058149	49092	69744	75039	81000	·
063597A	49430	70821	75075		
075174	49950	72103	75078		•
096547	50376	72104	75089		
096550	50385	72105	75090		
	50376	72106	75234		
	50750	72107	75238		
10760	51081	72108	76239		
11385	52013	73086	76240		
13905	52018	<b>7</b> 3087	76241		
15392	58546	73807	76560		





# Office of the Secretary of State

The undersigned, as Secretary of State of Texas, does hereby certify that the attached is a true and correct copy of each document on file in this office as described below:

Newfield Production Company Filing Number: 41530400

Articles of Amendment

September 02, 2004

In testimony whereof, I have hereunto signed my name officially and caused to be impressed hereon the Seal of State at my office in Austin, Texas on September 10, 2004.





Secretary of State

# ARTICLES OF AMENDMENT TO THE ARTICLES OF INCORPORATION OF INLAND PRODUCTION COMPANY

In the Office of the Secretary of State of Texas

SEP 02 2004

Corporations Section

Pursuant to the provisions of Article 4.04 of the Texas Business Corporation Act (the "TBCA"), the undersigned corporation adopts the following articles of amendment to the articles of incorporation:

#### ARTICLE 1 - Name

The name of the corporation is Inland Production Company.

#### ARTICLE 2 - Amended Name

The following amendment to the Articles of Incorporation was approved by the Board of Directors and adopted by the shareholders of the corporation on August 27, 2004.

The amendment alters or changes Article One of the Articles of Incorporation to change the name of the corporation so that, as amended, Article One shall read in its entirety as follows:

"ARTICLE ONE - The name of the corporation is Newfield Production Company."

ARTICLE 3 - Effective Date of Filing

This document will become effective \_ upon filing.

The holder of all of the shares outstanding and entitled to vote on said amendment has signed a consent in writing pursuant to Article 9.10 of the TBCA, adopting said amendment, and any written notice required has been given.

IN WITNESS WHEREOF, the undersigned corporation has executed these Articles of Amendment as of the 1<sup>st</sup> day of September, 2004.

INLAND RESOURCES INC.

Susan G. Riggs, Treasurer

#### Division of Oil, Gas and Mining

#### **OPERATOR CHANGE WORKSHEET**

006

Change of Operator (Well Sold)

#### ROUTING

1. GLH 2. CDW 3. FILE

Designation of Agent/Operator

#### X Operator Name Change

#### Merger

The operator of the well(s) listed below has changed, effective:			9/1/2004				7		
FROM: (Old Operator): N5160-Inland Production Company Route 3 Box 3630 Myton, UT 84052				TO: ( New Operator): N2695-Newfield Production Company Route 3 Box 3630 Myton, UT 84052					
Phone: 1-(435) 646-3721				Phone: 1-(435)	646-3721				┛
CA	A No.			Unit:					
WELL(S)					Ţ		_	<u> </u>	_
NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS	
FEDERAL 8-12-9-17	12	090S	170E	4304735748	14483	Federal	OW	DRL	K
FEDERAL 6-12-9-17	12	090S	170E	4304735749	14498	Federal	OW	DRL	K.
FEDERAL 2-12-9-17	12	090S	170E	4304735750	14484	Federal	OW	DRL	K
FEDERAL 15-13-9-17	13	090S	170E	4304735697		Federal	ow	APD	K
FEDERAL 13-13-9-17	13	090S	170E	4304735698		Federal	OW	APD	K
FEDERAL 11-13-9-17	13	090S	170E	4304735699		Federal	OW	APD	K
FEDERAL 9-13-9-17	13	090S	170E	4304735700		Federal	ow	APD	K
FEDERAL 7-13-9-17	13	090S	170E	4304735701		Federal	ow	APD	K
FEDERAL 5-13-9-17	13	090S	170E	4304735702		Federal	ow	APD	K
FEDERAL 3-13-9-17	13	090S	170E	4304735703		Federal	ow	APD	K
FEDERAL 1-13-9-17	13	090S	170E	4304735704		Federal	ow	APD	K
FEDERAL 1-14-9-17	14	090S	170E	4304735706		Federal	OW	APD	K
FEDERAL 3-14-9-17	14	090S	170E	4304735707		Federal	ow	APD	K
FEDERAL 9-14-9-17	14	090S	170E	4304735708		Federal	OW	NEW	K
FEDERAL 11-14-9-17	14	090S	170E	4304735709		Federal	ow	APD	K
FEDERAL 15-14-9-17	14	090S	170E	4304735710		Federal	ow	APD	K
FEDERAL 16-6-9-18	06	090S	180E	4304735751		Federal	ow	APD	K
FEDERAL 12-6-9-18	06	090S	180E	4304735752		Federal	ow	APD	K
FEDERAL 10-6-9-18	06	090S	180E	4304735753		Federal	ow	APD	K
FEDERAL 11-9-9-18	09	090S	180E	4304735763		Federal	ow	APD	K
							<del> </del>	<del> </del>	_
	<u>L</u>								

#### **OPERATOR CHANGES DOCUMENTATION**

Enter date after each listed item is completed

(R649-8-10) Sundry or legal documentation was received from the FORMER operator on:
 (R649-8-10) Sundry or legal documentation was received from the NEW operator on:
 9/15/2004

3. The new company was checked on the Department of Commerce, Division of Corporations Database on:

2/23/2005

4. Is the new operator registered in the State of Utah:

YES Business Number:

755627-0143

5. If NO, the operator was contacted contacted on:

6a. (R649-9-2)Waste Manag	ement Plan has been received on:	IN PLACE		
6b. Inspections of LA PA sta	ate/fee well sites complete on:	waived		
7. Federal and India	n Lease Wells: The BLM and or th	ne BIA has appro	ved the merger, i	name change,
or operator change for al	I wells listed on Federal or Indian leas	es on:	BLM	BIA
8. Federal and India	n Units:			
The BLM or BIA has	approved the successor of unit operato	r for wells listed on:	n/a	<del></del>
9. Federal and India	n Communization Agreements	s ("CA"):		
The BLM or BIA has a	approved the operator for all wells liste	ed within a CA on:	na/	_
<u> </u>	, ,	= -		nsfer of Authority to
Inject, for the enhanced	secondary recovery unit/project for th	e water disposal we	ll(s) listed on:	2/23/2005
DATA ENTRY: 1. Changes entered in the C	oil and Gas Database on:	2/28/2005		
-			2/29/200	5
2. Changes have been enter	red on the Monthly Operator Change	e Spread Sneet on:	2/28/200	<u>3_</u>
3. Bond information entere	d in RBDMS on:	2/28/2005		
4. Fee/State wells attached	to bond in RBDMS on:	2/28/2005		
5. Injection Projects to new	operator in RBDMS on:	2/28/2005		
6. Receipt of Acceptance of	f Drilling Procedures for APD/New or	n:	waived	
FEDERAL WELL(S)	BOND VERIFICATION:			
1. Federal well(s) covered	by Bond Number:	UT 0056		
INDIAN WELL(S) BO	OND VERIFICATION:			
Indian well(s) covered b	y Bond Number:	61BSBDH2912		
FEE & STATE WELI	(S) BOND VERIFICATION:			
1. (R649-3-1) The <b>NEW</b> o	perator of any fee well(s) listed covere	ed by Bond Number	61BSBDH2	<u>919</u>
2. The FORMER operator	has requested a release of liability from	n their bond on:	n/a*	
The Division sent respons	e by letter on:	n/a		
LEASE INTEREST O	WNER NOTIFICATION:			<u> </u>
,	ER operator of the fee wells has been notify all interest owners of this chang		med by a letter from n/a	the Division
COMMENTS:				
*Bond rider changed operator	or name from Inland Production Comp	any to Newfield Pro	duction Company - 1	received 2/23/05

FOKM 3160-5 (June 1990)

# DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-013
Expires: March 31, 1993

Non-Routine Fracturing

Conversion to Injection

Water Shut-Off

Dispose Water
(Note: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

- - -

5. Lease Designation and Serial No. 007 SUNDRY NOTICES AND REPORTS ON WELLS UTU-39713 Do not use this form for proposals to drill or to deepen or reentry a different reservoir. 6. If Indian, Allottee or Tribe Name Use "APPLICATION FOR PERMIT -" for such proposals NA 7. If Unit or CA, Agreement Designation SUBMIT IN TRIPLICATE N/A 1. Type of Well 8. Well Name and No. Oil Gas X Well FEDERAL 1-13-9-17 9. API Well No. 2. Name of Operator 43-047-35704 NEWFIELD PRODUCTION COMPANY 10. Field and Pool, or Exploratory Area EIGHT MILE FLAT 3. Address and Telephone No. Rt. 3 Box 3630, Myton Utah, 84052 435-646-3721 11. County or Parish, State 4. Location of Well (Footage, Sec., T., R., m., or Survey Description) 660 FNL 660 FEL NE/NE Section 13, T9S R17E UINTAH COUNTY, UT. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA 12. TYPE OF SUBMISSION TYPE OF ACTION X Notice of Intent Abandonment Change of Plans Recompletion **New Construction** 

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Newfield Production Company requests to extend the Permit to Drill this well for one year. The original approval date was 5/24/04 (expiration 5/24/05).

Plugging Back Casing Repair

Altering Casing

**Permit Extension** 

Other

This APD has not been approved yet by the BLM.

Subsequent Report

Final Abandonment Notice

Approved by the Utah Division of

Oil, Gas and M

By:

RECEIVED
MAY 0 4 2305

DIV. OF OIL, GAS & MINING

1			
14. I hereby certify that the foregraph is true and correct Signed  Mandie Crozier  Tit	tle Regulatory Specialist	Date	5/3/2005
CC: UTAH DOGM	·		
(This space for Federal or State office use)		1	
Approved by Tit	tle COMPLIANTO OFFICEROR	Date	
Conditions of approval, if any:	and CHO		
CC: Utah DOGM	ADDING CONTROL OF THE STATE OF		



# Application for Permit to Drill Request for Permit Extension

Validation
(this form should accompany the Sundry Notice requesting permit extension)

API: 43-047-35704  Well Name: Federal 1-13-9-17  Location: NE/NE Section 13, T9S R17E  Company Permit Issued to: Newfield Production Comp  Date Original Permit Issued: 5/24/2004	any
The undersigned as owner with legal rights to drill on above, hereby verifies that the information as submitte approved application to drill, remains valid and does r	ed in the previously
Following is a checklist of some items related to the a verified.	pplication, which should be
If located on private land, has the ownership changed agreement been updated? Yes□No□ ♠	, if so, has the surface
Have any wells been drilled in the vicinity of the proporthe spacing or siting requirements for this location? Ye	
Has there been any unit or other agreements put in pl permitting or operation of this proposed well? Yes□N	
Have there been any changes to the access route inc of-way, which could affect the proposed location? Yes	
Has the approved source of water for drilling changed	? Yes□No <b>□</b> X
Have there been any physical changes to the surface which will require a change in plans from what was disevaluation? Yes□No□	
Is bonding still in place, which covers this proposed w	ell? Ye͡s <b>xí</b> No⊡
Manho Crozies Signature	5/3/2005 Date
Title: Regulatory Specialist	
Representing: Newfield Production Company	RECEIVED

--- Und & Anivers

# RECEIVED

# JUN 0 3 2005

Form 31 DIV. OF OIL, GAS & MINING (September 2001)	FORM APPROVED OMB No. 1004-0136 Expires January 31, 2004	
UNITED STATES DEPARTMENT OF THE I	5. Lease Serial No.	
BUREAU OF LAND MANA	SEMENT	U-39713
APPLICATION FOR PERMIT TO DE	RILL OR REENTER	6. If Indian, Allottee or Tribe Name
		N/A
la. Type of Work: DRILL REENTE	R ·	7. If Unit or CA Agreement, Name and No.
		N/A  8. Lease Name and Well No.
lb. Type of Well: 🔼 Oil Well 🚨 Gas Well 🚨 Other	🗵 Single Zone 📮 Multi	
2. Name of Operator		9. API Well No.
Sield Production Company		1 43 047 35704
3a. Address	3b. Phone No. (include area code)	10. Field and Pool, or Exploratory
Route #3 Box 3630, Myton UT 84052	(435) 646-3721	Monument Butte
4. Location of Well (Report location clearly and in accordance with	any State requirements.*)	11. Sec., T., R., M., or Blk. and Survey or Area
At surface NE/NE 660' FNL 660' FEL	MAZ - 5 ZUU4 111	
At proposed prod. zone	MA; - 0 2004 1.5	NE/NE Sec. 13, T9S R17E
14. Distance in miles and direction from nearest town or post office*		12. County or Parish 13. State
Approximatley 17.1 miles southeast of Myton, Utah	 1871 - <u></u>	Uintah UT
15. Distance from proposed* location to nearest	16. No. of Acres in lease	17. Spacing Unit dedicated to this well
property or lease line, ft.  (Also to nearest drig. unit line, if any)  Approx. 660' tilse, NA tiunit	1,120.00	40 Acres
18. Distance from proposed location*	19. Proposed Depth	20. BLM/BIA Bond No. on file
to nearest well, drilling, completed, applied for, on this lease, ft. Approx. 2640'	6500'	#4488944 UT0056
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will sta	rt* 23. Estimated duration
5105' GL	4 th Quarter 2004	Approximately seven (7) days from spud to ng release.
	24. Attachments	
The following, completed in accordance with the requirements of Onsho	re Oil and Gas Order No.1, shall be at	tached to this form:
<ol> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> <li>A Surface Use Plan (if the location is on National Forest System SUPO shall be filed with the appropriate Forest Service Office).</li> </ol>	Item 20 above). 5. Operator certific	specific information and/or plans as may be required by the
25. Signature		
is. Signature	Name (Printed/Typed) Mandie Crozier	Date (5 / 1) /-//
Title Canche Cozell	, Maridie Orozier	1 3/ 9/01
Regulatory Specialist		
Apply very by (Signature)	Name (Printed/Typed)	Date
Muner 15 Varing 4	1	05/13/2014
Mineral Resources	Office	7,3
Application approval does not warrant or certify the the applicant holds loperations thereon.  Conditions of approval, if any, are attached.	egal or equitable title to those rights in	the subject lease which would entitle the applicant to conduct
Fitle 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it	a crime for any person knowingly or	d willfully to make to any department or agency of the Unite
States any false, fictitious or fraudulent statements or representations as t	o any matter within its jurisdiction.	a without to make to any department of agency of the Office

\*(Instructions on reverse)

COAs Page 1 of 3 Well No.: FEDERAL 1-13-9-17

# CONDITIONS OF APPROVAL APPLICATION FOR PERMIT TO DRILL

Company/C	perator: _	Inl	Inland Production Company							
Well Name	& Number	: <u>FE</u>	FEDERAL 1-13-9-17							
API Numbe	r:	43-	047-3	5704						
Lease Num	ber:	UT	ับ – 3	9713						
Location: _	NENE	Sec.	13	TWN:	098	RNG:	17E			
Agreement:		N//	4							

For more specific details on notification requirements, please check the Conditions of Approval for Notice to Drill and Surface Use Program.

COAs Page 2 of 3

Well No.: FEDERAL 1-13-9-17

# CONDITIONS OF APPROVAL FOR NOTICE TO DRILL

Approval of this application does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Submit an electronic copy of all logs run on this well in LAS format. This submission will replace the requirement for submittal of paper logs to the BLM.

Be aware fire restrictions may be in effect when location is being constructed and/or when well is being drilled. Contact the appropriate Surface Management Agency for information.

# A. <u>DRILLING PROGRAM</u>

# 1. Casing Program and Auxiliary Equipment

As a minimum, the usable water and oil shale resources shall be isolated and/or protected by having a cement top for the production casing at least 200 ft. above the top of the Green River Formation, identified at  $\pm 2.030$  ft.

COAs Page 3 of 3

Well No.: FEDERAL 1-13-9-17

# **CONDITIONS OF APPROVAL** FOR THE SURFACE USE PROGRAM OF THE **APPLICATION FOR PERMIT TO DRILL**

Company/Operator:

Newfield Production Company

API Number:

43-047-35704

Well Name & Number: Federal 1-13-9-17

Lease Number:

<u>U-39713</u>

Location:

NENE Sec. 13 T. 9 S. R. 17 E.

Surface Ownership:

<u>BLM</u>

Date NOS Received:

None

Date APD Received:

<u>5-5-04</u>

-None. All stipulations included in APD.

# DIVISION OF OIL, GAS AND MINING

# **SPUDDING INFORMATION**

Name of Cor	mpany:	NEWFIELD PRODUCTION COMPANY								
Well Name:		FEDEI	RAL 1-13-9-17							
Api No <u>:</u>	43-047-35	704	Lea	se Type:	FEDERAL					
Section 13	_Township_	09S_Range_17	7E_County	UINTAI	I					
Drilling Con	tractor	NDSI	RIG	# <u>NS#1</u>						
SPUDDE	D:									
	Date	09/29/05								
	Time	NOON								
	How	DRY	<del></del>							
Drilling wi	ill Comme	nce:	,							
Reported by_	_	FLOYD M	HTCHELL		_					
Telephone#		1-435-823	-3610							
Date 09	9/29/2005	Signed	СНД							

# **RECEIVED**

SEP 3 0 2005

STATE OF UTAH DIVISION OF GIL GAS AND HINING **ENTITY ACTION FORM -FORM 6** 

ACTION:	CURRENT	T 134		,	MYTON	, -,	102	·	_		
CODE	EMULANO.	ENILLA NO	API MUNIBER	WELL MANE			MICH	LOCATION			
В	99999	14844	43-047-35584		90	3ec	TP	RG	COUNTY	SPUD CATE	EXPECTIVE DA: -
MELL: O	ONIENTS /	00.1	7	FEDERAL 11-18-9-18	NESW	18	98	18E	DINTAH	09/26/05	10/0/
	9	REV	Sundar	ce						09/20/05	10/1/05
CODE	CURRENT	WESK CIA YTITKS	APINUMBER	WELL NAME	<del></del>						
$\neg$		1 3 1			00	sc	WELLICCA	TICH RG		SPUD	EFFECTIVE
В	99999	14844	43-047-35585	FEDERAL 13-18-9-18				1 "	COUNTY	DATE	CATE
	GR	011	0 .		SWSW	18	98	18E	UINTAH	09/28/05	10/11/05
			Sunda	ree							10/7/05
CT ON	CURRENT ENTRY NO.	ENTITY NO.	APINUMBER	WELL HAME	<del></del>						
7					CQ	SC	WELL JP	RG RG		SPUO	EFFECTIVE
В	99999	14844	43-047-35704	FEDERAL 1-13-9-17				- MG	COUNTY	DATE	
	Cafe	RN	1		NENE	13	98	17E	UINTAH	09/29/05	10/1/05
		700	Sundan	el							
DCE	CURRENT ENTITY NO.	.VEY ENTITY NO.	AFFAUMBER	'AGIL HAME							
					00	sc	WELL L	CCATICH	COUNTY	SPUD	EFFECTALE
Α ]	99999	14963	43-013-32656	FEDERAL 7-13-9-16					COUNTY	DATE	DATE
- 1	Sepi	)		- FT-104F 1-13-3-10	SWINE	_13_	98	16E	DUCHESNE	09/27/05	10/1/05
,											//
TICN CE	CURRENT SYITTY NO.	NEW	APINUMBER	MET HYNE							
	24111783.	SHALLING		WELL DAME	90	SC SC	WELLE	CATION		SFUO	EFFECTIVE
1	99999	14964	43-013-32657	EEDERAL O 40 0 40			IF.	RG	COUNTY	PATE	DATE
LS COM	MENTS: /	RRU		FEDERAL 6-13-9-16	SENW	13	<b>9</b> S	16E	DUCHESNE	09/26/05	10/7/05
	9	MU									17/1/05
	CLARSVI	HEW	AFITICHBER								
	99999	ENTITY NO.		WELHAME	98		WELL LO			SFUD	
	ENTS:					3C	TP	RG	CCUNTY	DATE	BFFECTIVE DATE
:≝COMM	-								1		

- there is a copy of the publishe of the reality. 6
- ८ ६५ १२२ है। जन्म क्रम कार कार्य है कास्त्रीर कार्यन का आधि स्त्रीत
- D. Re-resign and from one account entity to a new entity
- E. Ciberomphia in exemporis to clical

10 m Com Signature

Kire Kattle

Production Clerk

September 30, 2005

FORM 3160-5 (September 2001)

(Instructions on reverse)

# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM A	PPROVED
OMB No.	1004-0135
Expires January	nary 31 200

	BUREAU OF LAND MANAG					<ol><li>Lease Seria</li></ol>	l No.	<u> </u>
SUNDRY		UTU39713		•				
abandoned we	his form for proposals to c ell. Use Form 3160-3 (APC	) for su	o re-enter an ich proposals		:	6. If Indian, A	llottee or	Tribe Name.
	EPLICATE A Orbeillistr	actiais				7. If Unit or C	A/Agree	ment, Name and/or No.
1. Type of Well						SUNDANCE	UNIT	
Oil Well Gas Well	Other					8. Well Name		
Name of Operator     Newfield Production Company						FEDERAL 1		7
3a. Address Route 3 Box 3630		3h Phone	No. (include are	code)	1	9. API Well N	0.	
Myton, UT 84052		435.646.1	•	coue		4304735704	Pool or F	Exploratory Area
4. Location of Well (Footage, Sec.			7721			Monument B		Exploratory Area
660 FNL 660 FEL	, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,					11. County or	Parish, S	State
NE/NE Section 13 T9S R1	7E					Uintah,UT	ŕ	
12. CHECK	APPROPRIATE BOX(ES	) TO IN	IDICATE NA	TUR	E OF NO	TICE, OR	OTHE	R DATA
TYPE OF SUBMISSION			TYPE	OF	ACTION			
<b>—</b>	Acidize	Dee <sub>1</sub>	en		Production	(Start/Resume)	) 🗖	Water Shut-Off
☐ Notice of Intent	Alter Casing	Frac	ture Treat	$\overline{}$	Reclamatio	on.		Well Integrity
X Subsequent Report	Casing Repair	New	Construction		Recomplet	te	X	Other
_	Change Plans	Plug	& Abandon		Temporari	ly Abandon		Spud Notice
Final Abandonment Notice	Convert to Injector	Plug	Back		Water Disp	posal		
On 9-29-05 MIRU NDSI sp 315.08'KB. On 10-04-05 Ce Returned 3.5 bbls cement t	ud rig #1. Drill 310' of 12 1/4 ement with 160 sks of Class o pit.	." nole v	vith air mist. Ti 2% CaCL+ 1/4	H W/	7 Jts 8 5/	8" J-55 24# Mixed @ 15	csgn. 3	Set @ > 1.17 cf/sk yeild.
I hereby certify that the foregoing is Name (Printed/ Typed)	s true and correct	<u> </u>	<b>Fitle</b>					
<b>Ray Нептега</b>			Drilling Foreman					
Signature Ray Hen	era		Date 10/05/2005		· · · · · · · · · · · · · · · · · · ·			
	THIS SPACE TO	NI SEE					de Laberto	
Approved by			Title				Date	
Conditions of approval, if any, are attach certify that the applicant holds legal or ea	quitable title to those rights in the subje		Office			<del>-</del>		
which would entitle the applicant to cond Title 18 U.S.C. Section 1001 and Title 4	3 U.S.C. Section 1212, make it a crime			villfull	y to make to a	any department o	r agency o	of the United
States any false, fictitious and fraudulent	statements or representations as to any	matter wit	nın its jurisdiction			<del></del>		

OCT 0 6 2005

FIVED

# NEWFILD PRODUCTION COMPANY - CASING & CEMENT REPORT

			<u>8 5/8</u>	CASING SET	AT	315.08				
I AST CASIN	IC 8.5/8"	SET /	AT 315'		OPERATOR	)	Newfield F	Production C	ompany	
DATUM			71 9 <u>19</u>		WELL				Ompany	
DATUM TO	•	ASING		<del></del>	FIELD/PRO					
		AD FLANGE						NDSI NS #1		
		LOGGE			0014110101	011 01110 #		TOOT TO WY		
HOLE SIZE										
LOG OF CAS	SING STRIN	IG:								
PIECES	OD	1 "	MAKE - DESCI	RIPTION	WT/FT	GRD	THREAD	CONDT	LENGTH	
									,	
		Shoe	Joint 43.01'							
		WHI - 92 cs					8rd	А	0.95	
7	8 5/8"	Maverick ST			24#	J-55	8rd	Α	303.23	
			GUIDE	shoe			8rd	Α	0.9	
CASING INV	ENTORY B	AL.	FEET	JTS	TOTAL LEN	GTH OF STI	RING		305.08	
TOTAL LENGTH OF STRING			305.08	7	LESS CUT OFF PIECE					
LESS NON CSG. ITEMS			1.85		PLUS DATUM TO T/CUT OFF CSG					
PLUS FULL	JTS. LEFT (	DUT	0		CASING SE	T DEPTH		315.08		
	TOTAL		303.23	7	] <sub>1</sub>					
TOTAL CSG	. DEL. (W/O	THRDS)	303.23	7	Д СОМРАЯ	RE				
TIMING			1ST STAGE		]					
BEGIN RUN	CSG.	Spud	9/29/2005	12:00 PM	GOOD CIRC	THRU JOB		yes		
CSG. IN HOI	E		9/30/2005	3:00 PM	Bbis CMT C	IRC TO SUR	FACE	3.5 bbls		
BEGIN CIRC	;		10/4/2005	9:02 AM	RECIPROCA	ATED PIPE I	OR	N/A		
BEGIN PUM	P CMT		10/4/2005	9:12 AM			_		-	
BEGIN DSPI	CMT		10/4/2005	9:23 AM	BUMPED PI	LUG TO _		528	PSI	
PLUG DOW	N .		10/4/2005	9:29 AM						
CEMENT US	ED	ļ		CEMENT CO	MPANY-	B. J.				
STAGE	# SX	<u> </u>		CEMENT TYP						
1	160	Class "G" w	/ 2% CaCL2 +	1/4#/sk Cello-F	lake mixed @	2) 15.8 ppg 1	.17 cf/sk yiel	d		
	<u></u>									
		TCHER PLAC				SHOW MAK	E & SPACIN	1G		
Centralizers	s - Middle fi	rst, top seco	nd & third for	3		· · · · · · · · · · · · · · · · · · ·				

COMPANY REPRESENTATIVE Ray Herrera

RECEIVED DATE October 4,2005

FORM 3160-5 (September 2001)

# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED OMB No. 1004-0135 Expires January 31,2004

<ol><li>Lease Serial No</li></ol>
-----------------------------------

	NOTICES AND REPORTS		UTU39713	
abandoned we	his form for proposals to drill ell. Use Form 3160-3 (APD) f	or such proposals.	6. If Indian, Allo	ttee or Tribe Name.
1. Type of Well	CIPMCATE - Other Instruct		7. If Unit or CA/ SUNDANCE U	Agreement, Name and/or No.
Oil Well Gas Well	Other		8. Well Name an	d No.
2. Name of Operator			FEDERAL 1-1	3-9-17
Newfield Production Company	21-	Dt Ma (i I anda)	9. API Well No.	
3a. Address Route 3 Box 3630 Myton, UT 84052		Phone No. (include are code) 5.646.3721	4304735704	ol, or Exploratory Area
4. Location of Well (Footage, Sec		5.040.3721	Monument But	
660 FNL 660 FEL		•	11. County or Pa	rish, State
NE/NE Section 13 T9S R1	7E	-	Uintah,UT	
12. CHECK	APPROPRIATE BOX(ES) T	O INIDICATE NATURI	E OF NOTICE, OR O	THER DATA
TYPE OF SUBMISSION		TYPE OF A	CTION	
☐ Notice of Intent ☐ Subsequent Report ☐ Final Abandonment Notice	Acidize Alter Casing Casing Repair Change Plans Convert to Injector	Fracture Treat	Production(Start/Resume) Reclamation Recomplete Temporarily Abandon Water Disposal	■ Water Shut-Off ■ Well Integrity ■ Other ■ Weekly Status Report
Abandonment Notices shall be filed inspection.)  On 10-9-05 MIRU Patterso 8.625 csgn to 1,500 psi. Ve out cement & shoe. Drill a Dig/SP/GR log's TD to surf. / KB. Cement with 350 sks bbls cement returned to pit	n results in a multiple completion or recomponly after all requirements, including reclar in Rig #155. Set all equipment, armal BLM field, & Roosevelt DC 7.875 hole with fresh water to a face. PU & TIH with Guide shoe cement mixed @ 11.0 ppg & 3. Nipple down Bop's. Drop slips	Pressure test Kelly, TIW, OGM office was notifed of a depth of 5615'. Lay down e, shoe jt, float collar, 131 6.43 yld. Then 450 sks cer s @ 85,000 #'s tension. Ro	Choke manifold, & Bo test. PU BHA and tag n drill string & BHA. O jt's of 5.5 J-55, 15.5# nent mixed @ 14.4 pp	the site is ready for final op's to 2,000 psi. Test cement @ 270'. Drill pen hole log w/ csgn. Set @ 5601.43' g & 1.24 yld. With 20
I hereby certify that the foregoing is Name (Printed/Typed) Ray Herrera Signature	strue and correct	Title Drilling Foreman Date		
Kan Hen	rera	10/16/2005		
	भिक्षकार्यकार सम्बद्धाः । इ.स.च्याच्याच्याच्याच्याच्याच्याच्याच्याच्या	EDERAL OR STATE	OFFICE USE TO THE	serie de la companya
Approved by	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Title	Da	ate
	ned. Approval of this notice does not warran quitable title to those rights in the subject le duct operations thereon.			
	3 U.S.C. Section 1212, make it a crime for a statements or representations as to any ma		to make to any department or a	gency of the United

(Instructions on reverse)

# NEWFIELD PRODUCTION COMPANY - CASING & CEMENT REPORT

			5 1/2"	CASING SET	AT Flt cllr @			,	
LAST CASIN	G <u>8 5/8"</u>	SET A	T 3 <u>15'</u>		OPERATOR		Newfield F	roduction (	ompany
DATUM	12' KB				WELL	Federal 1-	13-9-17		
DATUM TO	OUT OFF CA	SING _	12'		FIELD/PRO	SPECT _	Monumen	t Butte	
DATUM TO E	BRADENHEA	AD FLANGE			CONTRACT	OR & RIG#		Patterson	# 155 _
ro_DRILLER	5615'	LOGGE	R 56 <u>11'</u>						
HOLE SIZE	7 7/8"								
LOG OF CAS	SING STRING	G:			•	/···			
PIECES	OD	ITEM - N	MAKE - DESC	RIPTION	WT/FT	GRD	THREAD	CONDT	LENGTH
		Landing Jt							14
		Short jt	6.63' @ 3774						
131	5 1/2"	ETC LT & C	casing		15.5#	J-55	8rd	Α	5545.57
		Float collar							0.6
1	5 1/2"	ETC LT&C c			15.5#	J-55	8rd	Α	42.61
			GUIDE	shoe			8rd	A	0.65
CASING INV	ENTORY BA	AL.	FEET	JTS	TOTAL LEN	IGTH OF ST	RING		5603.43
TOTAL LENG	TH OF STE	RING	5603.43	132	LESS CUT	OFF PIECE			14
LESS NON C	SG. ITEMS		15.25		PLUS DATU	12			
PLUS FULL .	JTS. LEFT C	DUT	209.04	5	CASING SE	T DEPTH			5601.43
	TOTAL		5797.22	132	լ				
TOTAL CSG.	DEL. (W/O	THRDS)	5797.22	137	COMPA	RE			
TIMING	•		1ST STAGE	2nd STAGE					
BEGIN RUN	CSG.		10/13/2005	4:00 AM	GOOD CIR	THRU JOB	-	yes	
CSG. IN HOL	E		10/13/2005	7:00am	Bbis CMT C	IRC TO SUF	FACE	20	
BEGIN CIRC			10/13/2005	7:30 AM	RECIPROC	ATED PIPE I	FOR	_THRUST <u>ROI</u>	<u>KE</u>
BEGIN PUMI	CMT		10/13/2005	9:03 AM	DID BACK F	PRES. VALV	E HOLD?	yes	
BEGIN DSPL	CMT		10/13/2005	9:56 AM	BUMPED P	LUG TO _		2000	PSI
PLUG DOWN	1		1/13/2005	10:20 AM					
CEMENT US	ED			CEMENT CO	MPANY-	B. J.			
STAGE	# SX			CEMENT TYP	E & ADDITI	/ES			
1	350	Premlite II w	/ 10% gel + 3	% KCL, 3#'s /s	k CSE + 2# s	sk/kolseal + 1	/4#'s/sk Cel	lo Flake	
		mixed @ 11.	.0 ppg W / 3.43	3 cf/sk yield					
2	450	50/50 poz W	// 2% Gel + 3%	KCL, .5%EC1	,1/4# sk C.F	. 2% gel. 3%	SM mixed @	2) 14.4 ppg W/	1.24 YLD
CENTRALIZI	ER & SCRAT	TCHER PLAC	EMENT			SHOW MAK	E & SPACII	NG	
Centralizers	- Middle fii	rst, top seco	nd & third. Th	en every thir	d collar for a	total of 20.		<u>.</u>	
				103					

DATE <u>October 13,2005</u> COMPANY REPRESENTATIVE Ray Herrera

CMOSCH, Care and a

FORM 3160-5 (September 2001)

# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0135
Evnires Imparts 31 2004

	5. Lease Sérial No.
	UTU39713
ķ	

SUNDRY Do not use th	UTU39713								
abandoned we	6. If Indian, Allottee or Tribe Name.								
				-					
SUBMIT IN TI	RIPLICATE - Other Instruct	ions on reverse side	<u> </u>	7. If Unit or CA/Ag	greement, Name and/or No.				
I. Type of Well				SUNDANCE UN	IT				
X Oil Well Gas Well	☐ Other			8. Well Name and 1	No.				
2. Name of Operator				FÉDERAL 1-13-					
Newfield Production Company	lat -		7.3	9. API Well No.					
3a. Address Route 3 Box 3630 Myton, UT 84052		Phone No. <i>(include are co</i> .646.3721	ode)	4304735704	T. T. 1				
4. Location of Well (Footage, Sec.		.040.3721		Monument Butte	or Exploratory Area				
660 FNL 660 FEL				11. County or Paris	h, State				
NE/NE Section 13 T9S R1	<i>7</i> E 			Uintah,UT					
12. CHECK	APPROPRIATE BOX(ES) T	O INIDICATE NAT	URE OF NO	OTICE, OR OTH	ÆR DATA				
TYPE OF SUBMISSION		TYPE	OF ACTION						
	Acidize	Deepen	Production	ı(Start/Resume)	☐ Water Shut-Off				
X Notice of Intent	Alter Casing	Fracture Treat	Reclamati	on	☐ Well Integrity				
Subsequent Report	Casing Repair	New Construction	Recomple	tė	Other				
_	Change Plans	Plug & Abandon	Temporari	ily Abandon					
Final Abandonment Notice	Convert to Injector	Plug Back	X Water Dis	posal					
involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandoment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final importance.  Formation water is produced to a steel storage tank. If the production water meets quality guidelines, it is transported to the Ashley, Monument Butte, Jonah, and Beluga water injection facilities by company or contract trucks. Subsequently, the produced water is injected into approved Class II.wells to enhance Newfield's secondary recovery project.  Water not meeting quality criteria, is disposed at Newfield's Pariette #4 disposal well (Sec. 7, T9S R19E) or at State of Utah approved surface disposal facilities.  Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY									
I hereby certify that the foregoing is Name (Printed/Typed)	s true and correct	Title							
Mandie Crozier									
Signature	(ania	Date 11/01/2005							
y v vor rand	E USE								
Approved by		Title		Date					
	ied. Approval of this notice does not warran quitable title to those rights in the subject leadured operations thereon.			·····	RECEIVED				
	3~U.S.C. Section 1212, make it a crime for a statements or representations as to any mat		lfully to make to	any department or ager	ney of the United NOV 0 2 2005				

(Instructions on reverse)

FORM 3160-5

# UNITED STATES

FORM A.	PPROVED
OMB No.	1004-0135
Expires Ian	uary 31 2004

	EPARTMENT OF THE INTE				No. 1004-0135 January 31,2004
I	BUREAU OF LAND MANAGEM	IENT	ļ.	5. Lease Serial No.	
SUNDRY	SUNDRY NOTICES AND REPORTS ON WELLS not use this form for proposals to drill or to re-enter an				
abandoned W	ell. Use Form 3160-3 (APD) fo	or such proposals	i. [1	6. If Indian, Allottee o	r Tribe Name.
CHITALAND IN TH	RIPLICATE - Other Instruct				
SUBMIT IN II	AIFLICATE - CAREF HISTORI	ions on reverse si	uc	_	ement, Name and/or No.
1. Type of Well				SUNDANCE UNIT	
	Other			8. Well Name and No.	
Name of Operator     Newfield Production Company			<u> </u>	FEDERAL 1-13-9-1	7
3a. Address Route 3 Box 3630	3Ь.	Phone No. (include are		9. API Well No. 3 4304735704	
Myton, UT 84052	<del></del>	6.646.3721		10. Field and Pool, or	Exploratory Area
	c., T., R., M., or Survey Description)		1	Monument Butte	<u> </u>
660 FNL 660 FEL  NE/NE Section 13 T9S R1	70		ł	11. County or Parish,	State
NE/NE Section 15 195 K1	/E			Uintah,UT	
12. CHECK	X APPROPRIATE BOX(ES) T	O INIDICATE NA	TURE OF NO	TICE, OR OTHE	R DATA
TYPE OF SUBMISSION		TYP:	E OF ACTION		<del></del>
	Acidize	Deepen	Productions	(Start/Resume)	Water Shut-Off
X Notice of Intent	Alter Casing	Fracture Treat	Reclamatio	` —	Well Integrity
Subsequent Report	Casing Repair	New Construction	Recomplete	e <u> </u>	Other
☐ Final Abandonment Notice	Change Plans	Plug & Abandon	Temporaril		Variance
Pina) Abandonment Notice	Convert to Injector	Plug Back	Water Disp	osal	
Abandonment Notices shall be filed inspection.)  Newfield Production Comptanks to be equipped with formation, which are relative separator to maximize gas.  Newfield is requesting a value of gas when the this	on results in a multiple completion or recomplication of recompletion of recompletion of recompletion of recompletion of recompletion of requirements, including reclar recompletion of requirements, including reclar recompletion of requirements of requirements of requirements of recompletion of recompletion of recompletion of results of res	nation, have been complete om Onshore Order valves. Newfield op od). The majority of the oil production tar	ed, and the operator had a CFR Part 31 erates wells the the wells are eaths equipped w	as determined that the sit 160 Section 4 requ at produce from the equipped with a the ith back pressure	e is ready for final  uiring production e Green River ree phase  devices will emit
I hereby certify that the foregoing is	s true and correct	Title		Maria Cara Cara Cara	•
Name (Printed/Typed) Mandie Crozier		Regulatory Speci	alist		
Signatura		Date			
1/ Janh	e Wohn	11/01/2005			·
	TÉMS SPACE FOR F	EDERAL OR ST	ATE OFFICE	USE	
			Accept	ed by the	
Approved by Conditions of approval, if any, are attack	hed. Approval of this notice does not warrar	Title		ivicion Diate	Federal Approval Of This
	quitable title to those rights in the subject le		Oil, Gas	and Mining	Action is Necessary
	duct operations unergon.  13 U.S.C. Section 1212, make it a crime for a t statements or representations as to any mat	my person knowing beaud		ny departity in or avenc	of the trinted
States any false, fictitions and fraudulent (Instructions on reverse)	t statements or representations as to any mat	_	7 7 2		- RECEIVED
1221 AL BETRAIN ON TELEVISION		Ву		\	NOV 0 2 2005
					Man a m =

FORM 3160-5 (September 2001)

# UNITE CATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM AI	PROVED
OMB No Expires Janu	1004-0135 pary 31,2004

SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

5. Lease Serial No.	
U <b>T</b> U39713	
6 If Indian Allottee of	Tribe Name.

SUBMIT IN TE	RIPLICATE - Other Ins	tructions on re	verse side			greement, Name and/or .vo.		
1. Type of Well					SUNDANCE UI	NIT		
☐ Gas Well ☐ Gas Well ☐	Other				8. Well Name and			
2. Name of Operator					FEDERAL 1-13-9-17			
Newfield Production Company	-	3b. Phone No. (i	nclude are code		9. API Well No. 4304735704			
3a. Address Route 3 Box 3630 Myton, UT 84052		435.646.3721	HETALIE UTE COME	,		, or Exploratory Area		
4. Location of Well (Footage, Sec.	., T., R., M., or Survey Descrip-				Monument Butte	2		
660 FNL 660 FEL					11. County or Par	ish, Stat <b>e</b>		
NE/NE Section 13 T9S R1	7E				Uintah.UT			
12. CHECK	APPROPRIATE BOX(I	ES) TO INIDIC	ATE NATU	RE OF N	OTICE, OR OT	HER DATA		
TYPE OF SUBMISSION			TYPE OF	ACTION				
_	Acidize	Deepen		Productio	n(Start/Resume)	■ Water Shut-Off		
Notice of Intent	Alter Casing	Fracture Tr	eat 🔲	Reclamat	ion	Well Integrity		
X Subsequent Report	Casing Repair	New Const	ruction	Recomple	ete	X Other		
	Change Plans	Plug & Aba	andon 🔲	Tempora	ily Abandon	Weekly Status Report		
Final Abandonment Notice	Convert to Injector	Plug Back		Water Di	sposal.			
Subject well had completic the well. A cement bond lo with 20/40 mesh sand. Per #3(4708'-4716'), (4642'-46 plugs were used between 10-27-2005. Bridge plugs v bore rod pump was run in	g was run and a total of for forated intervals are as for 46'); Stage #4(4018'-4020 stages. Fracs were flowed were drilled out and well v	our Green River bllows: Stage #1 3'),(3965'-3992') a back through o vas cleaned to 5	intervals wei (5370'-5374 . All perforati cnokes. A sei 5558'. Zones	re perfora '); Stage # ons, were vice rig w were swa	ted and hydrau #2 [4894'-4916'   4 JSPF, Comp   as moved over  b tested for sar	ically fracture freated ); Stage sosite flow-through frac the well on ad cleanup. A 1 1/2"		
I hereby certify that the foregoing	is true and correct	Title						
Name (Printed/ Typed) Lana Nebeker;  Production Clerk								
Signature Date 11/09/2005								
TYMB27	THIS SPACE			E OFFI	CE USE			
				<del></del>				
Approved by			Title	· · · · · · · · · · · · · · · · · · ·	<u>ID</u>	ate		
Conditions of approval, if any, are attac certify that the applicant holds legal or which would entitle the applicant to co	equitable title to those rights in the s induct operations thereon.	subject lease	Office					
Title 18 U.S.C. Section 1001 and Title States any false, fictitious and fraudule	43 U.S.C. Section 1212, make it a c nt statements or representations as to	rime for any person kr o any matter within its	nowingly and willf jurisdiction	ully to make	o any department or a	RECEIVED		

(Instructions on reverse)

NOV 1 0 2005

FORM 3160-4 (July 1992)

SUBMIT IN DUPLICATE\* FORM APPROVED

(See other instructions ons

OMB NO. 1004-0137

# **UNITED STATES DEPARTMENT OF THE INTERIOR**

Expires: February 28, 1995 reverse side) 5. LEASE DESIGNATION AND SERIAL NO.

		BUKE	AU OF L	N UNA	ANAGEN	ICN	<u> </u>				39/13
WELL CO	MPLE	ETION	OR RE	COMP	LETION	RI	EPORT A	ND LOG*	6. IF INDIAN. 7		OR TRIBE NAME IA
la. TYPE OF WORK									7. UNIT AGRE		· · · · · · · · · · · · · · · · · · ·
		OIL	X	GAS	DRY		Other				dance
1b. TYPE OF WELL		WELL [		WELL		Ш	Other .			Ounc	
									8. FARM OR L	EASE NAMI	E. WELL NO.
1 1 1	ORK	DEEPEN		PLUG	DIFF		0.1			Endoral	1-13-9-17
WELL   OV  2. NAME OF OPERATOR	ER [			BACK	RESVR.		Other		9. WELL NO.	ederal	1-13-9-17
2. MANUE OF OFERATION		Nev	wfield Ex	ploratio	n Compar	١٧		•	Z. WELL NO.	43-047	7-35704
3. ADDRESS AND TELEPHONE				·	· · · · · · · · · · · · · · · · · · ·				10. FIELD AND	POOL OR V	WILDCAT
					Denver, C						ent Butte
4. LOCATION OF WELL (R At Surface	leport locat						°) 9S, Rng 17E		OR AREA	M., OR BLC	OCK AND SURVEY
At top prod. Interval reported	l below				,		, 3		s	ec. 13, <sup>-</sup>	T9S, R16E
											,
At total depth			14	. API NO.	1.00		DATE ISSUED	•	12. COUNTY O	R PARISH	13. STATE
· · · · · · · · · · · · · · · · · · ·					13-35704			/24/04	Uin		UT
15. DATE SPUDDED 16. D 9/29/05	ATE T.D. R	EACHED 12/05	17. DATE	COMPL. (Re 10/3	ady to prod.)		18. elevations (d <b>5105</b>		c.)* 5117' KB		19. ELEV. CASINGHEAD
20. TOTAL DEPTH. MD & TVD		21. PLUG BAC	K T D M D & :		22. IF MULTI	PLE C		23. INTERVALS	ROTARY TOOLS	i	CABLE TOOLS
10. TOTAL DELTIE MO C TVD		II. I EVG DAC	K 1.D., WD &	1110	HOW MA		01111 622	DRILLED BY	1	1	C. IDILE 10000
5615'			5558'					>	X		
24. PRODUCING INTERVAL(S)	OF THIS C	OMPLETION-								Ī	25. WAS DIRECTIONAL SURVEY MADE
			G	reen Ri	iver 396	5'-5	492				
26. TYPE ELECTRIC AND OTH	En LOGE D	1.18.1									No 27. WAS WELL CORED
Dual Induction Gua			nsated [	ensity.	Compens	ate	d Neutron, C	R. Caliper.	Cement Bond I		No
23.	<b>,</b>	,					all strings set in v				
CASING SIZE/GRADI	E	WEIGHT.			SET (MD)		HOLE SIZE		MENT, CEMENTING RECO		AMOUNT PULLED
8-5/8" - J-55 5-1/2" - J-55	)	24 15.5			15' 601'	ļ	12-1/4" 7-7/8"		vith 160 sx Class "C ite II and 450 sx 50		
3-1/2 - 3-33	,	10.	)#1	- 50	)() 1	-	1-110	330 SX FIEIII	ite ii anu 450 sx 50	30 P02	
29.		LINI	ER RECORD	)		1		30.	TUBING REC	CORĐ	
SIZE	TOP (N	MD)	воттом	(MD)	SACKS CEMEN	T*	SCREEN (MD)	SIZE	DEPTH SET (ME	))	PACKER SET (MD)
								2-7/8"	EOT @ 5469		TA @ 5401'
							22	ACID SHOT	FRACTURE, CEMEN	TEQUEE	
31. PERFORATION RECORD : INTERV		ze and number)	SIZI	3	SPF/NUMBE		32. DEPTH INTE				MATERIAL USED
				<u> </u>							
(CP2,3&4) 5370'-5374'. 54	52'-5457',	5482-5492'	.41	"	4/76		5370'-	5492'	Frac w/ 60,560#	20/40 sa	nd in 489 bbls fluid
	(A1) 48	398'-4916"	.41		4/72		4898'-		Frac w/ 100,126#	20/40 sa	and in 712 bbls fluid
(C&B.5) 4708'	-4716, 46	642'-4646'	.41	15	4/48		4642'-	4716'	Frac w/ 65,266#	20/40 sa	nd in 589 bbls fluid
(GB4&6) 3965'-	-3992', 40	018'-4023'	.41	11	4/128		3965'-	4023'	Frac w/ 124,851#	20/40 sa	and in 816 bbls fluid
33.* SATE FIRST PRODUCTION	<del></del>	DRODUCTOS	A THELLION OF	lowipo E	PROD It, pumpingsize a			•		WHILST	VTUS (Producing or shut-in)
10/31/05		TRODUCTIO	3) (ICIO) (F	2-1/2" x	1-1/2" x 1	6' F	RHAC Plung	jer Pump			RODUCING
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36. I hereby certify that he	oregoing ar	nd attached in	formation is e	omplete an	l correct as dete	rmine	d from all availabl Regu	e records			
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FORMATION	ТОР	воттом	DESCRIPTION, CONTENTS, ETC.		то	P
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				NAME	MEAS. DEPTH	TRUE VERT. DEPT
	Ì		Well Name	Garden Gulch Mkr	3504'	
			Federal 1-13-9-17	Garden Gulch 1	3678'	
		ŀ		Garden Gulch 2	3788'	
				Point 3 Mkr	4044'	ţ
				X Mkr	4282'	
				Y-Mkr	4321'	
				Douglas Creek Mkr	4450'	
				BiCarbonate Mkr	4682'	
				B Limestone Mkr	4804'	
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# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 8

1595 Wynkoop Street DENVER, CO 80202-1129 Phone 800-227-8917 http://www.epa.gov/region08

FEB 0 3 2009

Ref: 8P-W-GW
CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Eric Sundberg Newfield Production Company 1001 Seventeenth Street – Suite 2000 Denver, CO 80202 Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY

Re: FINAL PERMIT

AOR Corrective Action Required EPA UIC Permit UT21063-07192

Well: Federal 1-13-9-17 Uintah County, UT API No.: 43-047-35704

95 ME 13

Dear Mr. Sundberg:

Enclosed is your copy of the FINAL Underground Injection Control (UIC) Permit for the proposed Federal 1-13-9-17 injection well. A Statement of Basis that discusses the conditions and requirements of this EPA UIC Permit is also included.

The Public Comment period for this Permit ended on January 9, 2009. No comments on the Draft Permit were received during the Public Notice period. Please note that EPA made minor corrections to Appendix B of the Draft Permit to remove unnecessary and duplicative testing requirements; therefore, the Effective Date for this EPA UIC Permit is 30 days after the date of issuance. All conditions set forth herein refer to Title 40 Parts 124, 144, 146, and 147 of the Code of Federal Regulations (CFR) and are regulations that are in effect as of the Effective Date of this Permit.

Please note that under the terms and conditions of this Final Permit you are authorized only to construct the proposed injection well. Prior to commencing injection, you first must fulfill all "Prior to Commencing Injection" requirements of the Final Permit, Part II Section C.1, and obtain written Authorization to Inject from the EPA. It is your responsibility to be familiar with and to comply with all provisions of your Final Permit. The EPA forms referenced in the permit are available at http://www.epa.gov/safewater/uic/reportingforms.html. Guidance documents for Cement Bond Logging, Radioactive Tracer testing, Step Rate testing, Mechanical Integrity demonstration, Procedure in the Event of a Mechanical Integrity Loss, and other EICEL EIVED guidances, are available at http://www.epa.gov/region8/water/uic/deep\_injection.html. Upon request, hard copies of the EPA forms and guidance can be provided.

This EPA UIC Permit is issued for the operating life of the well unless terminated (Part III, Section B). The EPA may review this Permit at least every five (5) years to determine whether any action is warranted pursuant to 40 CFR § 144.36(a).

If you have any questions on the enclosed Final Permit or Statement of Basis, please call Jason Deardorff of my staff at (303) 312-6583, or toll-free at (800) 227-8917, ext. 312-6583.

Accepted by the Urah Drain Service of Oil. Cas and two og FOR RECORD CHLY

Sincerely,

Eddie A. Sierra

Acting Assistant Regional Administrator Office of Partnerships and Regulatory Assistance

Encl: Final UIC Permit Statement of Basis

Cc: Uintah & Ouray Business Committee:
Curtis Cesspooch, Chairman
Ronald Groves, Councilman
Irene Cuch, Vice-Chairwoman
Steven Cesspooch, Councilman

Phillip Chimburas, Councilman Frances Poowegup, Councilwoman

Daniel Picard BIA - Uintah & Ouray Indian Agency

# All Enclosures:

Ferron Secakuku Director, Natural Resources Ute Indian Tribe

Larry Love Director of Energy & Minerals Dept. Ute Indian Tribe Gil Hunt Associate Director Utah Division of Oil, Gas, and Mining

Fluid Minerals Engineering Office BLM - Vernal Office

Michael Guinn District Manager Newfield Production Company Myton, Utah

# **\$EPA**

# UNDERGROUND INJECTION CONTROL PROGRAM PERMIT

PREPARED: January 2009

Permit No. UT21063-07192

Class II Enhanced Oil Recovery Injection Well

Federal 1-13-9-17 Uintah County, UT

Issued To

**Newfield Production Company** 

1001 Seventeenth Street, Suite 2000 Denver, CO 80202

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# Part I. AUTHORIZATION TO CONSTRUCT AND OPERATE

Under the authority of the Safe Drinking Water Act and Underground Injection Control (UIC) Program regulations of the U. S. Environmental Protection Agency (EPA) codified at Title 40 of the Code of Federal Regulations (40 CFR) Parts 2, 124, 144, 146, and 147, and according to the terms of this Permit,

Newfield Production Company 1001 Seventeenth Street, Suite 2000 Denver, CO 80202

is authorized to construct and to operate the following Class II injection well or wells:

Federal 1-13-9-17 660' FNL; 660' FEL, NENE S13, T9S, R17E Uintah County, UT

EPA regulates the injection of fluids into injection wells so that injection does not endanger underground sources of drinking water (USDWs). EPA UIC Permit conditions are based on authorities set forth at 40 CFR Parts 144 and 146, and address potential impacts to USDWs.

Under 40 CFR Part 144, Subpart D, certain conditions apply to all UIC Permits and may be incorporated either expressly or by reference. General permit conditions for which the content is mandatory and not subject to site-specific differences are not discussed in this document. Issuance of this Permit does not convey any property rights of any sort or any exclusive privilege, nor does it authorize injury to persons or property or invasion of other private rights, or any infringement of other Federal, State or local laws or regulations. (40 CFR §144.35) An EPA UIC Permit may be issued for the operating life of the injection well or project unless terminated for reasonable cause under 40 CFR §§144.39, 144.40 and 144.41, and may be reviewed at least once every five (5) years to determine if action is required under 40 CFR §144.36(a).

This Permit is issued for the life of the well(s) unless modified, revoked and reissued, or terminated under 40 CFR 144.39 or 144.40. This EPA Permit may be adopted, modified, revoked and reissued, or terminated if primary enforcement authority for a UIC Program is delegated to an Indian Tribe or State. Upon the effective date of delegation, reports, notifications, questions and other correspondence should be directed to the Indian Tribe or State Director.

Issue Date: FEB 0 3 2

Effective Date MAR 03 200

Eddie A. Sierra

Acting Assistant Regional Administrator\*

Office of Partnerships and Regulatory Assistance

\*NOTE: The person holding this title is referred to as the "Director" throughout this Permit.

# PART II. SPECIFIC PERMIT CONDITIONS

# Section A. WELL CONSTRUCTION REQUIREMENTS

These requirements represent the approved minimum construction standards for well casing and cement, injection tubing, and packer.

Details of the approved well construction plan are incorporated into this Permit as APPENDIX A. Changes to the approved plan that may occur during construction must be approved by the Director prior to being physically incorporated.

# 1. Casing and Cement.

The well or wells shall be cased and cemented to prevent the movement of fluids into or between underground sources of drinking water. The well casing and cement shall be designed for the life expectancy of the well and of the grade and size shown in APPENDIX A. Remedial cementing may be required if shown to be inadequate by cement bond log or other attempted demonstration of Part II (External) mechanical integrity.

# 2. Injection Tubing and Packer.

Injection tubing is required, and shall be run and set with a packer at or below the depth indicated in APPENDIX A. The packer setting depth may be changed provided it remains below the depth indicated in APPENDIX A and the Permittee provides notice and obtains the Director's approval for the change.

# 3. Sampling and Monitoring Devices.

The Permittee shall install and maintain in good operating condition:

- (a) a "tap" at a conveniently accessible location on the injection flow line between the pump house or storage tanks and the injection well, isolated by shut-off valves, for collection of representative samples of the injected fluid; and
- (b) one-half (1/2) inch female iron pipe fitting, isolated by shut-off valves and located at the wellhead at a conveniently accessible location, for the attachment of a pressure gauge capable of monitoring pressures ranging from normal operating pressures up to the Maximum Allowable Injection Pressure specified in APPENDIX C:
  - (i) on the injection tubing; and
  - (ii) on the tubing-casing annulus (TCA); and
- (c) a pressure actuated shut-off device attached to the injection flow line set to shut-off the injection pump when or before the Maximum Allowable Injection Pressure (MAIP) specified in APPENDIX C is reached at the wellhead; and
- (d) a non-resettable cumulative volume recorder attached to the injection line.

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# 4. Well Logging and Testing

Well logging and testing requirements are found in APPENDIX B. The Permittee shall ensure the log and test requirements are performed within the time frames specified in APPENDIX B. Well logs and tests shall be performed according to current EPA-approved procedures. Well log and test results shall be submitted to the Director within sixty (60) days of completion of the logging or testing activity, and shall include a report describing the methods used during logging or testing and an interpretation of the test or log results.

# 5. Postponement of Construction or Conversion

The Permittee shall complete well construction within one year of the Effective Date of the Permit, or in the case of an Area Permit within one year of Authorization of the additional well. Authorization to construct and operate shall expire if the well has not been constructed within one year of the Effective Date of the Permit or Authorization and the Permit may be terminated under 40 CFR 144.40, unless the Permittee has notified the Director and requested an extension prior to expiration. Notification shall be in writing, and shall state the reasons for the delay and provide an estimated completion date. Once Authorization has expired under this part, the complete permit process including opportunity for public comment may be required before Authorization to construct and operate may be reissued.

# 6. Workovers and Alterations

Workovers and alterations shall meet all conditions of the Permit. Prior to beginning any addition or physical alteration to an injection well that may significantly affect the tubing, packer or casing, the Permittee shall give advance notice to the Director and obtain the Director's approval. The Permittee shall record all changes to well construction on a Well Rework Record (EPA Form 7520-12), and shall provide this and any other record of well workover, logging, or test data to EPA within sixty (60) days of completion of the activity.

A successful demonstration of Part I MI is required following the completion of any well workover or alteration which affects the casing, tubing, or packer. Injection operations shall not be resumed until the well has successfully demonstrated mechanical integrity and the Director has provided written approval to resume injection.

# Section B. MECHANICAL INTEGRITY

The Permittee is required to ensure each injection well maintains mechanical integrity at all times. The Director, by written notice, may require the Permittee to comply with a schedule describing when mechanical integrity demonstrations shall be made.

An injection well has mechanical integrity if:

- (a) There is no significant leak in the casing, tubing, or packer (Part I); and
- (b) There is no significant fluid movement into an underground source of drinking water through vertical channels adjacent to the injection well bore (Part II).

# 1. Demonstration of Mechanical Integrity (MI).

The operator shall demonstrate MI prior to commencing injection and periodically thereafter. Well-specific conditions dictate the methods and the frequency for demonstrating MI and are discussed in the Statement of Basis. The logs and tests are designed to demonstrate both internal (Part I) and external (Part II) MI as described above. The conditions present at this well site warrant the methods and frequency required in Appendix B of this Permit.

In addition to these regularly scheduled demonstrations of MI, the operator shall demonstrate internal (Part I) MI after any workover which affects the tubing, packer or casing.

The Director may require additional or alternative tests if the results presented by the operator are not satisfactory to the Director to demonstrate there is no movement of fluid into or between USDWs resulting from injection activity. Results of MI tests shall be submitted to the Director as soon as possible but no later than sixty (60) days after the test is complete.

# 2. Mechanical Integrity Test Methods and Criteria

EPA-approved methods shall be used to demonstrate mechanical integrity. Ground Water Section Guidance No. 34 "Cement Bond Logging Techniques and Interpretation", Ground Water Section Guidance No. 37, "Demonstrating Part II (External) Mechanical Integrity for a Class II injection well permit", and Ground Water Section Guidance No. 39, "Pressure Testing Injection Wells for Part I (Internal) Mechanical Integrity" are available from EPA and will be provided upon request.

The Director may stipulate specific test methods and criteria best suited for a specific well construction and injection operation.

# 3. Notification Prior to Testing.

The Permittee shall notify the Director at least 30 days prior to any scheduled mechanical integrity test. The Director may allow a shorter notification period if it would be sufficient to enable EPA to witness the mechanical integrity test. Notification may be in the form of a yearly or quarterly schedule of planned mechanical integrity tests, or it may be on an individual basis.

# 4. Loss of Mechanical Integrity.

If the well fails to demonstrate mechanical integrity during a test, or a loss of mechanical integrity becomes evident during operation (such as presence of pressure in the TCA, water flowing at the surface, etc.), the Permittee shall notify the Director within 24 hours (see Part III Section E Paragraph 11(e) of this Permit) and the well shall be shut-in within 48 hours unless the Director requires immediate shut-in.

Within five days, the Permittee shall submit a follow-up written report that documents test results, repairs undertaken or a proposed remedial action plan.

Injection operations shall not be resumed until after the well has successfully been repaired and demonstrated mechanical integrity, and the Director has provided approval to resume injection.

# Section C. WELL OPERATION

INJECTION BETWEEN THE OUTERMOST CASING PROTECTING UNDERGROUND SOURCES OF DRINKING WATER AND THE WELL BORE IS PROHIBITED.

Injection is approved under the following conditions:

# 1. Requirements Prior to Commencing Injection.

Well injection, including for new wells authorized by an Area Permit under 40 CFR 144.33 (c), may commence only after all well construction and pre-injection requirements herein have been met and approved. The Permittee may not commence injection until construction is complete, and

- (a) The Permittee has submitted to the Director a notice of completion of construction and a completed EPA Form 7520-10 or 7520-12; all applicable logging and testing requirements of this Permit (see APPENDIX B) have been fulfilled and the records submitted to the Director; mechanical integrity pursuant to 40 CFR 146.8 and Part II Section B of this Permit has been demonstrated; and
  - (i) The Director has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the Permit; or
  - (ii) The Permittee has not received notice from the Director of his or her intent to inspect or otherwise review the new injection well within 13 days of the date of the notice in Paragraph 1a, in which case prior inspection or review is waived and the Permittee may commence injection.

# 2. Injection Interval.

Injection is permitted only within the approved injection interval, listed in APPENDIX C. Additional individual injection perforations may be added provided that they remain within the approved injection interval and the Permittee provides notice to the Director in accordance with Part II, Section A, Paragraph 6.

# 3. Injection Pressure Limitation

- (a) The permitted Maximum Allowable Injection Pressure (MAIP), measured at the wellhead, is found in APPENDIX C. Injection pressure shall not exceed the amount the Director determines is appropriate to ensure that injection does not initiate new fractures or propagate existing fractures in the confining zone adjacent to USDWs. In no case shall injection pressure cause the movement of injection or formation fluids into a USDW.
- (b) The Permittee may request a change of the MAIP, or the MAIP may be increased or decreased by the Director in order to ensure that the requirements in Paragraph (a) above are fulfilled. The Permitee may be required to conduct a step rate injection test or other suitable test to provide information for determining the fracture pressure of the injection zone. Change of the permitted MAIP by the Director shall be by modification of this Permit and APPENDIX C.

# 4. Injection Volume Limitation.

Injection volume is limited to the total volume specified in APPENDIX C.

# 5. Injection Fluid Limitation.

Injected fluids are limited to those identified in 40 CFR 144.6(b)(2) as fluids used for enhanced recovery of oil or natural gas, including those which are brought to the surface in connection with conventional oil or natural gas production that may be commingled with waste waters from gas plants which are an integral part of production operations unless those waters are classified as a hazardous waste at the time of injection, pursuant to 40 CFR 144.6(b). Non-exempt wastes, including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes and vacuum truck wastes, are NOT approved for injection. This well is NOT approved for commercial brine injection, industrial waste fluid disposal or injection of hazardous waste as defined by CFR 40 Part 261. The Permittee shall provide a listing of the sources of injected fluids in accordance with the reporting requirements in Part II Section D Paragraph 4 and APPENDIX D of this Permit.

# 6. Tubing-Casing Annulus (TCA)

The tubing-casing annulus (TCA) shall be filled with water treated with a corrosion inhibitor, or other fluid approved by the Director. The TCA valve shall remain closed during normal operating conditions and the TCA pressure shall be maintained at zero (0) psi.

If TCA pressure cannot be maintained at zero (0) psi, the Permittee shall follow the procedures in Ground Water Section Guidance No. 35 "Procedures to follow when excessive annular pressure is observed on a well."

# Section D. MONITORING, RECORDKEEPING, AND REPORTING OF RESULTS

# 1. Monitoring Parameters, Frequency, Records and Reports.

Monitoring parameters are specified in APPENDIX D. Pressure monitoring recordings shall be taken at the wellhead. The listed parameters are to be monitored, recorded and reported at the frequency indicated in APPENDIX D even during periods when the well is not operating.

Monitoring records must include:

- (a) the date, time, exact place and the results of the observation, sampling, measurement, or analysis, and;
- (b) the name of the individual(s) who performed the observation, sampling, measurement, or analysis, and;
- (c) the analytical techniques or methods used for analysis.

# 2. Monitoring Methods.

(a) Monitoring observations, measurements, samples, etc. taken for the purpose of complying with these requirements shall be representative of the activity or condition being monitored.

- (b) Methods used to monitor the nature of the injected fluids must comply with analytical methods cited and described in Table 1 of 40 CFR 136.3 or Appendix III of 40 CFR 261, or by other methods that have been approved in writing by the Director.
- (c) Injection pressure, annulus pressure, injection rate, and cumulative injected volumes shall be observed and recorded at the wellhead under normal operating conditions, and all parameters shall be observed simultaneously to provide a clear depiction of well operation.
- (d) Pressures are to be measured in pounds per square inch (psi).
- (e) Fluid volumes are to be measured in standard oil field barrels (bbl).
- (f) Fluid rates are to be measured in barrels per day (bbl/day).

#### 3. Records Retention.

- (a) Records of calibration and maintenance, and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained for a period of AT LEAST THREE (3) YEARS from the date of the sample, measurement, report, or application. This period may be extended anytime prior to its expiration by request of the Director.
- (b) Records of the nature and composition of all injected fluids must be retained until three (3) years after the completion of any plugging and abandonment (P&A) procedures specified under 40 CFR 144.52(a)(6) or under Part 146 Subpart G, as appropriate. The Director may require the Permittee to deliver the records to the Director at the conclusion of the retention period. The Permittee shall continue to retain the records after the three (3) year retention period unless the Permittee delivers the records to the Director or obtains written approval from the Director to discard the records.

## 4. Annual Reports.

Whether the well is operating or not, the Permittee shall submit an Annual Report to the Director that summarizes the results of the monitoring required by Part II Section D and APPENDIX D.

The first Annual Report shall cover the period from the effective date of the Permit through December 31 of that year. Subsequent Annual Reports shall cover the period from January 1 through December 31 of the reporting year. Annual Reports shall be submitted by February 15 of the year following data collection. EPA Form 7520-11 may be copied and shall be used to submit the Annual Report, however, the monitoring requirements specified in this Permit are mandatory even if EPA Form 7520-11 indicates otherwise.

# Section E. PLUGGING AND ABANDONMENT

# 1. Notification of Well Abandonment, Conversion or Closure.

The Permittee shall notify the Director in writing at least forty-five (45) days prior to: 1) plugging and abandoning an injection well, 2) converting to a non-injection well, and 3) in the case of an Area Permit, before closure of the project.

# 2. Well Plugging Requirements

Prior to abandonment, the injection well shall be plugged with cement in a manner which isolates the injection zone and prevents the movement of fluids into or between underground sources of drinking water, and in accordance with 40 CFR 146.10 and other applicable Federal, State or local law or regulations. Tubing, packer and other downhole apparatus shall be removed. Cement with additives such as accelerators and retarders that control or enhance cement properties may be used for plugs; however, volume-extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.6 lb/gal shall be placed between all plugs. A minimum 50 ft surface plug shall be set inside and outside of the surface casing to seal pathways for fluid migration into the subsurface. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. Prior to placement of the cement plug(s) the well shall be in a state of static equilibrium with the mud weight equalized top to bottom, either by circulating the mud in the well at least once or by a comparable method prescribed by the Director.

# 3. Approved Plugging and Abandonment Plan.

The approved plugging and abandonment plan is incorporated into this Permit as APPENDIX E. Changes to the approved plugging and abandonment plan must be approved by the Director prior to beginning plugging operations. The Director also may require revision of the approved plugging and abandonment plan at any time prior to plugging the well.

# 4. Forty Five (45) Day Notice of Plugging and Abandonment.

The Permittee shall notify the Director at least forty-five (45) days prior to plugging and abandoning a well and provide notice of any anticipated change to the approved plugging and abanonment plan.

# 5. Plugging and Abandonment Report.

Within sixty (60) days after plugging a well, the Permittee shall submit a report (EPA Form 7520-13) to the Director. The plugging report shall be certified as accurate by the person who performed the plugging operation. Such report shall consist of either:

- (a) A statement that the well was plugged in accordance with the approved plugging and abandonment plan; or
- (b) Where actual plugging differed from the approved plugging and abandonment plan, an updated version of the plan, on the form supplied by the Director, specifying the differences.

# 6. Inactive Wells.

After any period of two years during which there is no injection the Permittee shall plug and abandon the well in accordance with Part II Section E Paragraph 2 of this Permit unless the Permittee:

- (a) Provides written notice to the Director;
- (b) Describes the actions or procedures the Permittee will take to ensure that the well will not endanger USDWs during the period of inactivity. These actions and procedures shall include compliance with mechanical integrity demonstration, Financial Responsibility and all other permit requirements designed to protect USDWs; and
- (c) Receives written notice by the Director temporarily waiving plugging and abandonment requirements.

# PART III. CONDITIONS APPLICABLE TO ALL PERMITS

# Section A. EFFECT OF PERMIT

The Permittee is allowed to engage in underground injection in accordance with the conditions of this Permit. The Permittee shall not construct, operate, maintain, convert, plug, abandon, or conduct any other activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR 142 or may otherwise adversely affect the health of persons. Any underground injection activity not authorized by this Permit or by rule is prohibited. Issuance of this Permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of any other Federal, State or local law or regulations. Compliance with the terms of this Permit does not constitute a defense to any enforcement action brought under the provisions of Section 1431 of the Safe Drinking Water Act (SDWA) or any other law governing protection of public health or the environment, for any imminent and substantial endangerment to human health or the environment, nor does it serve as a shield to the Permittee's independent obligation to comply with all UIC regulations. Nothing in this Permit relieves the Permittee of any duties under applicable regulations.

# Section B. CHANGES TO PERMIT CONDITIONS

# 1. Modification, Reissuance, or Termination.

The Director may, for cause or upon a request from the Permittee, modify, revoke and reissue, or terminate this Permit in accordance with 40 CFR 124.5, 144.12, 144.39, and 144.40. Also, this Permit is subject to minor modification for causes as specified in 40 CFR 144.41. The filing of a request for modification, revocation and reissuance, termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any condition of this Permit.

## 2. Conversions.

The Director may, for cause or upon a written request from the Permittee, allow conversion of the well from a Class II injection well to a non-Class II well. Conversion may not proceed until the Permittee receives written approval from the Director. Conditions of such conversion may include but are not limited to, approval of the proposed well rework, follow up demonstration of mechanical integrity, well-specific monitoring and reporting following the conversion, and demonstration of practical use of the converted configuration.

# 3. Transfer of Permit.

Under 40 CFR 144.38, this Permit is transferable provided the current Permittee notifies the Director at least thirty (30) days in advance of the proposed transfer date (EPA Form 7520-7) and provides a written agreement between the existing and new Permittees containing a specific date for transfer of Permit responsibility, coverage and liability between them. The notice shall adequately demonstrate that the financial responsibility requirements of 40 CFR 144.52(a)(7) will be met by the new Permittee. The Director may require modification or revocation and reissuance of the Permit to change the name of the Permittee and incorporate such other requirements as may be necessary under the Safe Drinking Water Act; in some cases, modification or revocation and reissuance is mandatory.

# 4. Permittee Change of Address.

Upon the Permittee's change of address, or whenever the operator changes the address where monitoring records are kept, the Permittee must provide written notice to the Director within 30 days.

# 5. Construction Changes, Workovers, Logging and Testing Data

The Permittee shall give advance notice to the Director, and shall obtain the Director's written approval prior to any physical alterations or additions to the permitted facility. Alterations or workovers shall meet all conditions as set forth in this permit. The Permittee shall record any changes to the well construction on a Well Rework Record (EPA Form 7520-12), and shall provide this and any other record of well workovers, logging, or test data to EPA within sixty (60) days of completion of the activity.

Following the completion of any well workovers or alterations which affect the casing, tubing, or packer, a successful demonstration of mechanical integrity (Part III, Section F of this Permit) shall be made, and written authorization from the Director received, prior to resuming injection activities.

# Section C. SEVERABILITY

The Provisions of this Permit are severable, and if any provision of this Permit or the application of any provision of this Permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Permit shall not be affected thereby.

## Section D. CONFIDENTIALITY

In accordance with 40 CFR Part 2 and 40 CFR 144.5, information submitted to EPA pursuant to this Permit may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the validity of the claim will be assessed in accordance with the procedures in 40 CFR Part 2 (Public Information). Claims of confidentiality for the following information will be denied:

- The name and address of the Permittee, and
- information which deals with the existence, absence or level of contaminants in drinking water.

# Section E. GENERAL PERMIT REQUIREMENTS

# 1. Duty to Comply.

The Permittee must comply with all conditions of this Permit. Any noncompliance constitutes a violation of the Safe Drinking Water Act (SDWA) and is grounds for enforcement action; for Permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application; except that the Permittee need not comply with the provisions of this Permit to the extent and for the duration such noncompliance is authorized in an emergency permit under 40 CFR 144.34. All violations of the SDWA may subject the Permittee to penalties and/or criminal prosecution as specified in Section 1423 of the SDWA.

# 2. Duty to Reapply.

If the Permittee wishes to continue an activity regulated by this Permit after the expiration date of this Permit, under 40 CFR 144.37 the Permittee must apply for a new permit prior to the expiration date.

# 3. Need to Halt or Reduce Activity Not a Defense.

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit.

# 4. Duty to Mitigate.

The Permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Permit.

# 5. Proper Operation and Maintenance.

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Permit.

## 6. Permit Actions.

This Permit may be modified, revoked and reissued or teminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

## 7. Property Rights.

This Permit does not convey any property rights of any sort, or any exclusive privilege.

# 8. Duty to Provide Information.

The Permittee shall furnish to the Director, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this Permit. The Permittee is required to submit any information required by this Permit or by the Director to the mailing address designated in writing by the Director.

## 9. Inspection and Entry.

The Permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

 (a) Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit;

- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit:
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and,
- (d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the SDWA, any substances or parameters at any location.

# 10. Signatory Requirements.

All applications, reports or other information submitted to the Director shall be signed and certified according to 40 CFR 144.32. This section explains the requirements for persons duly authorized to sign documents, and provides wording for required certification.

# 11. Reporting Requirements.

- (a) Planned changes. The Permittee shall give notice to the Director as soon as possible of any planned changes, physical alterations or additions to the permitted facility, and prior to commencing such changes.
- (b) Anticipated noncompliance. The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- (c) Monitoring Reports. Monitoring results shall be reported at the intervals specified in this Permit.
- (d) Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Permit shall be submitted no later than 30 days following each schedule date.
- (e) Twenty-four hour reporting. The Permittee shall report to the Director any noncompliance which may endanger human health or the environment, including:
  - (i) Any monitoring or other information which indicates that any contaminant may cause endangerment to a USDW; or
  - (ii) Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between USDWs.

Information shall be provided, either directly or by leaving a message, within twenty-four (24) hours from the time the permittee becomes aware of the circumstances by telephoning (800) 227-8917 and requesting EPA Region VIII UIC Program Compliance and Technical Enforcement Director, or by contacting the EPA Region VIII Emergency Operations Center at (303) 293-1788.

In addition, a follow up written report shall be provided to the Director within five (5) days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

- (f) Oil Spill and Chemical Release Reporting: The Permittee shall comply with all reporting requirements related to the occurence of oil spills and chemical releases by contacting the National Response Center (NRC) at (800) 424-8802, (202) 267-2675, or through the NRC website http://www.nrc.uscg.mil/index.htm.
- (g) Other Noncompliance. The Permittee shall report all instances of noncompliance not reported under paragraphs Part III, Section E Paragraph 11(b) or Section E, Paragraph 11(e) at the time the monitoring reports are submitted. The reports shall contain the information listed in Paragraph 11(e) of this Section.
- (h) Other information. Where the Permittee becomes aware that it failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Director, the Permittee shall promptly submit such facts or information to the Director.

## Section F. FINANCIAL RESPONSIBILITY

# 1. Method of Providing Financial Responsibility.

The Permittee shall maintain continuous compliance with the requirement to maintain financial responsibility and resources to close, plug, and abandon the underground injection well(s). No substitution of a demonstration of financial responsibility shall become effective until the Permittee receives written notification from the Director that the alternative demonstration of financial responsibility is acceptable. The Director may, on a periodic basis, require the holder of a permit to revise the estimate of the resources needed to plug and abandon the well to reflect changes in such costs and may require the Permittee to provide a revised demonstration of financial responsibility.

#### 2. Insolvency.

In the event of:

- (a) the bankruptcy of the trustee or issuing institution of the financial mechanism; or
- (b) suspension or revocation of the authority of the trustee institution to act as trustee; or

(c) the institution issuing the financial mechanism losing its authority to issue such an instrument

the Permittee must notify the Director in writing, within ten (10) business days, and the Permittee must establish other financial assurance or liability coverage acceptable to the Director within sixty (60) days after any event specified in (a), (b), or (c) above.

The Permittee must also notify the Director by certified mail of the commencement of voluntary or involuntary proceedings under Title 11 (Bankruptcy), U.S. Code naming the owner or operator as debtor, within ten (10) business days after the commencement of the proceeding. A guarantor, if named as debtor of a corporate guarantee, must make such a notification as required under the terms of the guarantee.

# **APPENDIX A**

# WELL CONSTRUCTION REQUIREMENTS

See diagram.

The Federal No. 1-13-9-17 was drilled to a total depth of 5615 feet (KB) feet in the Douglas Creek Member of the Green River Formation.

Surface casing (8-5/8 inch) was set at a depth of 315 feet in a 12-1/4 inch hole using 160 sacks of Class "G" cement which was circulated to the surface.

Production casing (5-1/2 inch) was set at a depth of 5601 feet (KB) in a 7-7/8 inch hole with 350 sacks of Premium Lite II and 450 sacks of 50/50 poz mix. This well construction is considered adequate to protect USDWs.

The EPA calculates the top of cement as 430 feet from the surface. The Cement Bond Log (CBL) identifies top of cement at 170 feet. CBL analysis identified 64 feet of 80% index cement bond within the confining zone.

The schematic diagram shows proposed enhanced recovery injection perforations in the Douglas Creek Member of the Green River Formation. Additional perforations may be added at a later time between the depths of 3500 feet and the top of the Wasatch Formation (Estimated to be 5775 feet) provided the operator first notifies the Director and later submits an updated well completion report (EPA Form 7520-12) and schematic diagram.

The packer will be set no higher than 100 feet above the top perforation.

Federal 1-13-9-17 Spud Date 9-29-05 Initial Production: BOPD, Put on Production: 10-31-05 Proposed Injection MCFD, BWPD Wellbore Diagram GL 5105" KB-5117" FRAC JOB 10-25-05 5379-587-41 Frac CP & cands as follows: 60 Scott 10:48 such a 480 bible ingleming 17 fixe find. Trough @ avg press of 10:30 pm wravg rate of 25:4 BFM, ISIF 12:30 ps. Claic SURFACE CASING Content top @ 1797 CSG SIZE: 8-5/8" South 4368 gai Actual Bush 5106 gal. ORADE, 3-55 Frac Al vands as follows: 19-26-05 4898-4916 you BASE 1001 268 20140 sand in T12 bits Lightning 17 fine fluid. Trashed @ avg prass of 1780 psi weavy rate of \$5.3 BPM, ISIP 2170 psi, Calc fluid: 4896 gsl. Aotsol fluid: 4626 gsl. WEIGHT: 244 LENGTH: 136. (303.231) WEDW DEPTH LANDED: 313-08 KB 16-26-05 4541-4716° Frac B.5, C sands as follows: SOLE SIZE 12-1/4" 65266e 20/46 sand in 712 bbls Lightneng 17 from the Treated (f) my press of 1414 pet wravg rate of 75.1 BPM, ISB 2310 ps; Calc thish, 4540 gal. Actual flush, 4364 gal. CEMENT DATA 160 xxs Class "Cl" one, ext 45 obly unit to suc! Pruc GB4 & CB6 sands as follows: 124851# 2600 sand in 816 blas Lightung (? 18-26-05 3965-40231 PRODUCTION CASING has thad freshed by any press of 1630 has wang rate of 25 IP BPM ISBN 1820 pm Caic flush 3862 cal Actual flush; \$256 pm THE MER NOW TOP GIRORIU GRADE 1-55 WEIGHT 15 5# @ WK LENGTH 132 jts (5598.181) DEPTH LANDED, 5681,491 KB Tran @ 2682 MB @ 2724 ( hilliam @ 2742) HOLE SIZE: 7-7/8" CEMENT DATA 350 ses Prent Life II mixed & 450 ses 50/50 PGZ. CEMENT TOP AT: 170" GRSLLE BEID' SIZECBADEWT 7-78" (3-55 / 6.5% Grander Counter to 3 500 Packer @ 3930 NO OF JUNTS 168 /15 (5386.961) 1985-3092 TUBBLED ANCHOR: 5400 90 KB NO OF JOINTS 1 PA (72.54") 4018,40721 Donglas Creak @ 44 50 SEATING WIPPLE: 2-7/8" (1-10") 3440, -3204, SN LANDED AT 5436.24" KB NO GEJOSTIE I JU (31.31") TOTAL STRING LEDISTY BOT @ 5409 10 KB 4642-4646 4768-4216 PERFORATION RECORD 4808.1916 10-20-05 5#X2-5492" ÅZSPF 40 holes 10-20-05 5450-5457 a JSPF a JSPF Mholes 10-20-05 10-25-05 10-26-05 10 holes 12 holes 37 holes 5376-5374 4898-4916 4768-4716 4642-4646 4 JBFF 4 JSPF 10-26-05 4 JSPF id holes 16-26-05 10-26-05 4018-4025 3963-3992 d ISPF 4 ISPF II 5326-5374 \$457-5467 \$482-5492 NEWFIELD HODE SSS Federal 1-13-9-17 MOE & SOL 660 FNL & 660 FEL tie /me Milliand Secure 13-795-k-TE TT & 3311 Umrah Dr. Otah BLX 5650 an andarasma, Lesse of it used by 390 3000 Federal 1-13-9-17 construction.jpg

#### **APPENDIX B**

#### LOGGING AND TESTING REQUIREMENTS

#### Logs.

Logs will be conducted according to current UIC guidance. It is the responsibility of the Permittee to obtain and use guidance prior to conducting any well logging required as a condition of this permit.

#### NO LOGGING REQUIREMENTS

#### Tests.

Tests will be conducted according to current UIC guidance. It is the responsibility of the Permittee to obtain and use guidance prior to conducting any well test required as a condition of this permit.

TYPE OF TEST	DATE DUE
Pore Pressure	Prior to receiving authorization to inject
Standard Annulus Pressure	Prior to receiving authorization to inject and at least once every five (5) years after the last successful demonstration of Part I mechanical integrity

#### APPENDIX C

#### **OPERATING REQUIREMENTS**

#### **MAXIMUM ALLOWABLE INJECTION PRESSURE:**

Maximum Allowable Injection Pressure (MAIP) as measured at the surface shall not exceed the pressure(s) listed below.

	MAXIMUM ALLOWED INJECTION PRESSURE (psi)
WELL NAME	ZONE 1 (Upper)
Federal 1-13-9-17	910

#### **INJECTION INTERVAL(S):**

Injection is permitted only within the approved injection interval listed below. Injection perforations may be altered provided they remain within the approved injection interval and the Permittee provides notice to the Director in accordance with Part II, Section A, Paragraph 6. Specific injection perforations can be found in Appendix A.

VELL NAME: Federal 1-13-9-17		
	APPROVED INJECTI INTERVAL (KB, ft	
FORMATION NAME	TOP BOT	TOM (psi/ft)
Green River Formation	3,500.00 - 5,775.0	0 0.670

#### **ANNULUS PRESSURE:**

The annulus pressure shall be maintained at zero (0) psi as measured at the wellhead. If this pressure cannot be maintained, the Permittee shall follow the procedures listed under Part II, Section C. 6. of this permit.

#### **MAXIMUM INJECTION VOLUME:**

There is no limitation on the number of barrels per day (bbls/day) of water that shall be injected into this well, provided further that in no case shall injection pressure exceed that limit shown in Appendix C.

#### APPENDIX D

#### MONITORING AND REPORTING PARAMETERS

This is a listing of the parameters required to be observed, recorded, and reported. Refer to the permit Part II, Section D, for detailed requirements for observing, recording, and reporting these parameters.

OBSERVE N	MONTHLY AND RECORD AT LEAST ONCE EVERY THIRTY DAYS
	Injection pressure (psig)
OBSERVE AND RECORD	Annulus pressure(s) (psig)
	Injection rate (bbl/day)
	Fluid volume injected since the well began injecting (bbls)

	ANNUALLY
ANALYZE	Injected fluid total dissolved solids (mg/l)
	Injected fluid specific gravity
	Injected fluid specific conductivity
	Injected fluid pH

	ANNUALLY
	Each month's maximum and averaged injection pressures (psig)
	Each month's maximum and minimum annulus pressure(s) (psig)
DEDORT	Each month's injected volume (bbl)
REPORT	Fluid volume injected since the well began injecting (bbl)
	Written results of annual injected fluid analysis
	Sources of all fluids injected during the year

In addition to these items, additional Logging and Testing results may be required periodically. For a list of those items and their due dates, please refer to APPENDIX B - LOGGING AND TESTING REQUIREMENTS.

SINAL PERMIT

#### APPENDIX E

#### PLUGGING AND ABANDONMENT REQUIREMENTS

The well shall be plugged in a manner that isolates the injection zone and prevents the movement of fluid into or between USDWs and in accordance with other applicable Federal, State or local law or regulation. Tubing, packers, and any downhole apparatus shall be removed. Class A, C, G, and H cements, with additives such as accelerators and retarders that control or enhance cement properties, may be used for plugs. However, volume extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.2 lb/gal shall be placed between all plugs. Within sixty (60) days after plugging, the owner or operator shall submit Plugging Record (EPA Form 7520-13) to the Director. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. At a minimum, the following plugs are required:

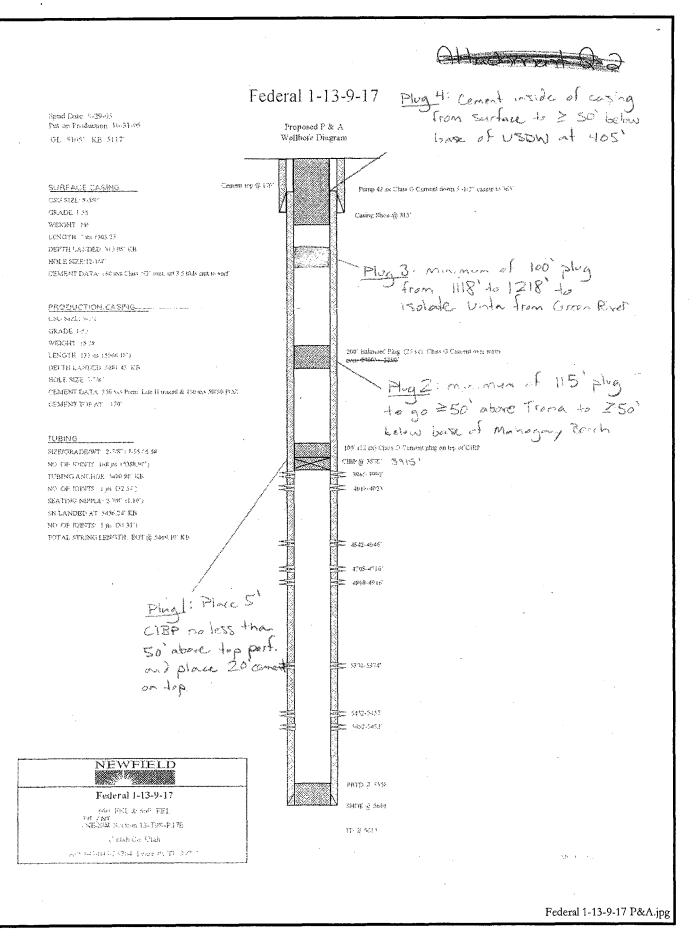
PLUG NO. 1: Seal the Injection Zone: Set a cast iron bridge plug (CIBP) no more than 50 feet above the top perforation. Place at least 20 feet of cement plug on top of the CIBP.

PLUG NO. 2: Seal the Mahogany Shale and Trona intervals: Perforate and squeeze a cement plug up the backside of the 5-1/2 inch casing across the Trona Zone and the Mahogany Shale from approximately 2632 to 2792 feet (KB) unless pre-existing backside cement precludes cement-squeezing this interval. Set a minimum 160-foot balanced cement plug inside the 5-1/2 inch casing across the Trona Zone and the Mahogany Shale, approximately 2632 to 2792 feet (KB). Both the cement-squeeze and the plug must extend from a minimum of 50 feet above the top of the Trona-Bird's Nest to a minimum of 50 feet below the base of the Mahogany Shale.

PLUG NO. 3: Seal possible USDWs by isolating the Uinta Formation from the Green River Formation: Perforate and squeeze cement up the backside of the 5-1/2 inch casing from approximately 1118 to 1218 feet (KB) unless pre-existing backside cement precludes cement-squeezing this interval. Set a minimum 100-foot, balanced cement plug inside the 5-1/2 inch casing centered at the contact between the Uinta Formation and the Green River Formation at 1168 feet (KB). Both the cement-squeeze and the plug should extend from a minimum of 50 feet above the contact at 1168 feet (KB) to a minimum of 50 feet below the contact at 1168 feet.

PLUG NO.4: Seal surface casing: Set a Class "G" cement plug within the 5-1/2 inch casing to 552 feet and up the 5-1/2 inch by 8-5/8 inch casings annulus to the surface.

See Schematic Diagram.



#### APPENDIX F

#### CORRECTIVE ACTION REQUIREMENTS

The Federal No. 2-13-9-17 and Federal No. 8-13-9-17 wells will be monitored weekly at the surface for evidence of fluid movement out of the injection zone.

In addition, Newfield developed a corrective action monitoring program, effective July 10, 2008, entitled "Procedure related to proposed Class II Enhanced Oil Recovery Injection Wells determined by the EPA to have specific Area of Review (AOR) wells with inadequate cement across the Confining Zone."

If possible fluid movement out of the injection zone is identified, either through the weekly monitoring, through Newfield's July 10, 2008 procedure described above, or through any other means (for example, evidence of fluid flow or increased bradenhead annulus pressure readings, tubing-casing annulus pressure readings, or other evidence of a mechanical integrity failure), the Permittee will shut in the Federal No. 1-13-9-17 injection well and Federal No. 8-13-9-17 and/or Federal No. 2-13-9-17 immediately and notify the Director. No injection into the Federal No. 1-13-9-17 will be permitted until the Permittee has notified the Director that the situation has been resolved, submitted Rework Records (EPA Form No 7520-12) and a schematic diagram, and received authorization from the Director to re-commence injection.



# RE: Procedure related to proposed Class II Enhanced Oil Recovery Injection Wells determined by the EPA to have specific Area of Review (AOR) wells with inadequate cement across the confining zone

Effective July 10, 2008 Newfield Production Company will implement the following procedure to address concerns related to protection of Underground Sources of Drinking Water (USDW) in AOR wells where the interval of cement bond index across the confining zone behind pipe has been determined to be inadequate. The procedure is intended to meet the corrective action requirements found in the UIC Class II permit, as well as provide data that could be used to detect and prevent fluid movement out of the proposed injection zone.

- 1) Establish baseline production casing by surface casing annulus pressures prior to water injection in subject well with a calibrated gauge.
- 2) Record the baseline pressure, report findings to Newfield engineering group and keep on file so it is available upon request
- 3) Place injection well in service. Run packer integrity and radioactive tracer logs to verify wellbore integrity and determine zones taking water.
- 4) Construct a geologic cross section showing zones taking water and their geologic equivalent zones in the AOR wells.
- 5) Submit a report of the packer integrity log, radioactive tracer log, and geologic cross section to to the Newfield engineering staff for review and keep on file so it is available upon request
- 6) Weekly observations of the site will be made by Newfield during normal well operating activities. Any surface discharge of fluids will be reported immediately.
- 7) After injection well is placed in service, weekly observations of annulus pressure will be made and compared to baseline pressure and will be recorded once monthly. The recorded pressure information will be kept on file and be available upon request.
- 8) If pressure increases by more than 10% above baseline at any time in an AOR well with insufficient cement bond, Newfield will run a temperature survey log in subject well. This log, in concert with the geologic crossection, will enable the determination of water movement in the open hole by production casing annulus through a shift in geothermal gradient.
- 9) If water movement is determined in annulus, Newfield will shut in the injection well and repair the production casing by open hole annulus or leave the injection well out of service.

### STATEMENT OF BASIS

### NEWFIELD PRODUCTION COMPANY FEDERAL 1-13-9-17 UINTAH COUNTY, UT

#### **EPA PERMIT NO. UT21063-07192**

**CONTACT:** Jason Deardorff

U. S. Environmental Protection Agency

Ground Water Program, 8P-W-GW

1595 Wynkoop Street

Denver, Colorado 80202-1129

Telephone: 1-800-227-8917 ext. 312-6583

This STATEMENT OF BASIS gives the derivation of site-specific UIC Permit conditions and reasons for them. Referenced sections and conditions correspond to sections and conditions in the Permit.

EPA UIC permits regulate the injection of fluids into underground injection wells so that the injection does not endanger underground sources of drinking water. EPA UIC permit conditions are based upon the authorities set forth in regulatory provisions at 40 CFR Parts 144 and 146, and address potential impacts to underground sources of drinking water. Under 40 CFR 144.35 Issuance of this permit does not convey any property rights of any sort or any exclusive privilege, nor authorize injury to persons or property of invasion of other private rights, or any infringement of other Federal, State or local laws or regulations. Under 40 CFR 144 Subpart D, certain conditions apply to all UIC Permits and may be incorporated either expressly or by reference. General Permit conditions for which the content is mandatory and not subject to site-specific differences (40 CFR Parts 144, 146 and 147) are not discussed in this document.

Upon the Effective Date when issued, the Permit authorizes the construction and operation of injection wells so that the injection does not endanger underground sources of drinking water, governed by the conditions specified in the Permit. The Permit is issued for the operating life of the injection well or project unless terminated for reasonable cause under 40 CFR 144.39, 144.40 and 144.41. The Permit is subject to EPA review at least once every five (5) years to determine if action is required under 40 CFR 144.36(a).

#### PART I. General Information and Description of Facility

The Federal No. 1-13-9-17 is an existing production well drilled into the Green River Formation. It is the initial intent of the applicant to convert this well to a Class II injection well for the purpose of enhanced oil recovery. The Federal No. 1-13-9-17 has total depth in the Douglas Creek Member.

Newfield Production Company 1001 Seventeenth Street, Suite 2000 Denver, CO 80202

on

May 18, 2006

submitted an application for an Underground Injection Control (UIC) Program Permit or Permit Modification for the following injection well or wells:

Federal 1-13-9-17 660' FNL; 660' FEL, NENE S13, T9S, R17E Uintah County, UT

Regulations specific to Uintah-Ouray Indian Reservation injection wells are found at 40 CFR 147 Subpart TT.

The application, including the required information and data necessary to issue or modify a UIC Permit in accordance with 40 CFR Parts 144, 146 and 147, was reviewed and determined by EPA to be complete.

The Permit will expire upon delegation of primary enforcement responsibility (primacy) for applicable portions of the UIC Program to the Ute Indian Tribe or the State of Utah unless the delegated agency has the authority and chooses to adopt and enforce this Permit as a Tribal or State Permit.

TABLE 1.1 shows the status of the well or wells as "New", "Existing", or "Conversion" and for Existing shows the original date of injection operation. Well authorization "by rule" under 40 CFR Part 144 Subpart C expires automatically on the Effective Date of an issued UIC Permit.

TABLE 1.1						
WELL STATUS / DATE OF OPERATION						
	NEW WELLS					
Well Name	Well Status	Date of Operation				
Federal 1-13-9-17	New	N/A				

PART II. Permit Considerations (40 CFR 146.24)

#### **Hydrogeologic Setting**

Water wells for domestic supply in this area, when present, generally are completed into the shallow alluvium, the Duchesne River Formation, or the underlying Uinta Formation, and the water generally contains approximately 500 to 1,500 mg/L and higher total dissolved solids.

The Uinta-Animas aquifer in the Uinta Basin is present in water-yielding beds of sandstone, conglomerate, and siltstone of the Duchesne River and Uinta Formations, the Renegade Tongue of the Wasatch Formation, and the Douglas Creek Member of the Green River Formation. The Renegade Tongue of the Wasatch Formation and the Douglas Creek Member of the Green River Formation contain an aquifer along the southern and eastern margins of the basin where the rocks primarily consist of fluvial, massive, irregularly bedded sandstone and siltstone. Water-yielding units in the Uinta-Anìmas aquifer in the Uinta Basin commonly are separated from each other and from the underlying Mesaverde aquifer by units of low permeability composed of claystone, shale, marlstone, or limestone. In the Uinta Basin, for example, the part of the aquifer in the Duchesne River and Uinta Formations ranges in thickness from 0 feet at the southern margin of the aquifer to as much as 9,000 feet in the north-central part of the aquifer. Ground-water recharge to the Uinta-Animas aquifer generally occurs in the areas of higher altitude along the margins of the basin. Ground water is discharged mainly to streams, springs, and by transpiration from vegetation growing along stream valleys. The rate of groundwater withdrawal is small, and natural discharge is approximately equal to recharge. Recharge occurs near the southern margin of the aquifer, and discharge occurs near the White and Green Rivers (from USGS publication HA 730-C). Water samples from Mesaverde sands in the nearby Natural Buttes Unit yielded highly saline water.

#### Geologic Setting (TABLE 2.1)

The proposed enhanced oil recovery injection well is located in the Sundance Unit, which is part of the Greater Monument Butte Field, T7-9S and R15-19E, which lies near the center of the broad, gently northward dipping south flank of the Uinta Basin. More than 450 million barrels of oil (63 MT) have been produced from sediments of the Uinta Basin. The Uinta Basin is a topographic and structural trough encompassing an area of more than 9300 square mi (14,900 km) in northeast Utah. The basin is sharply asymmetrical, with a steep north flank bounded by the east-westtrending Uinta Mountains, and a gently dipping south flank. The Uinta Basin was formed in Paleocene to Eocene time, creating a large area of internal drainage which was filled by the ancestral Lake Uinta. The lacustrine, or fresh water lake-formed, sediments deposited in and around Lake Uinta make up the Uintah and Green River Formations. The southern shore of Lake Uinta was very broad and flat, resulting in large cyclic shifts of the location of the shoreline during the many repeated transgressive and regressive cycles caused by the climatic and tectonicinduced rise and fall of water levels of the lake. Distributary-mouth bars, distributary channels, and near-shore bars are the primary oil producing sandstone reservoirs in the area. (Ref. "Reservoir Characterization of the Lower Green River Formation, Southwest Uinta Basin, Utah Biannual Technical Progress Report, 4/1/99-9/30/99", by C. D. Morgan, Program Manager, November 1999, Contract DE-AC26-98BC15103).

The Duchesne River Formation is absent in this area. Shale and siltstone of the Uintah Formation outcrop and compose the surface rock throughout the area. The lower 600 feet to 800 feet of the Uinta Formation, consisting generally of shale interbedded with occasionally water-bearing sandstone lenses between 5 feet to 20 feet thick, is underlain by the Green River Formation. The Green River Formation is further subdivided into several Member and local marker units. The cyclic nature of Green River deposition in the southern shore area resulted in numerous stacked, intertonguing deltaic and near-shore sand and silt deposits. Red alluvial shale and siltstone

deposits that intertongue with the Green River sediments are of the Colton and Wasatch Formations. Under the Wasatch Formation is the Mesaverde Formation, which consists primarily of continental-origin deposits of interbedded shale, sandstone, and coal.

The geologic dip is about 200 feet per mile, and there are no known surface faults in this area. Veins of gilsonite, a natural resinous hydrocarbon occasionally mined as a resource, occurs in the greater Uintah Basin though it is predominantly found on the eastern margin of the basin near the Colorado border. Vertical veins, generally between 2 ft to 6 ft wide but up to 28 ft wide, may extend many miles in length and occasionally extend as deep as 2000 ft. In this area within the Greater Monument Butte Field there is one known gilsonite vein. This vein is not considered to present a pathway for migration of fluid out of the injection zone because it terminates at depth of about 2000 ft, far above the protective confining layer and much deeper injection zone. Newfield and the owner of this former gilsonite mine have agreed to conditions for operation near this vein to ensure no potential for impact to this vein or to ground water from enhanced oil recovery operations.

## TABLE 2.1 GEOLOGIC SETTING

Federal 1-13-9-17

Formation Name	Top (ft)	Base (ft)	TDS	(mg/l)	Lithology
Uinta: USDW	12	417	<	10,000	Sand and shale.
Uinta	417	1,168		2 .	Interbedded lacustrine sand, shale and carbonate with fluvial sand and shale.
Green River: Trona	2,682	2,720			Evaporite.
Green River Formation	2,682	2,720			Interbedded lacustrine sand, shale and carbonate with fluvial sand and shale.
Green River: Mahogany Bench	2,724	2,742			Oil shale.
Upper Green River Shale	3,310	3,500			Shale.
Green River: Garden Gulch Member	3,500	4,450		26,181	Interbedded lacustrine sand, shale and carbonate with fluvial sand and shale.
Green River: Douglas Creek Member	4,450	5,650		26,181	Interbedded lacustrine sand, shale and carbonate with fluvial sand and shale.
Green River: Basal Carbonate Member	5,650	5,775			

#### Proposed Injection Zone(s) (TABLE 2.2)

An injection zone is a geological formation, group of formations, or part of a formation that receives fluids through a well. The proposed injection zones are listed in TABLE 2.2.

Injection will occur into an injection zone that is separated from USDWs by a confining zone which is free of known open faults or fractures within the Area of Review.

The EPA approved interval for Class II enhanced recovery injection is located between the top of the Garden Gulch Member (3,500 feet) and the top of the Wasatch Formation estimated to be 5,775 feet.

## TABLE 2.2 INJECTION ZONES

Federal 1-13-9-17

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Fracture Gradient (psi/ft)	Porosity	Exempted?*
Green River Formation	3,500	5,775	26,181	0.670		N/A
* C - Currently Exempted E - Previously Exempted P - Proposed Exemption N/A - Not Applicable		<del></del>				

#### Confining Zone(s) (TABLE 2.3)

A confining zone is a geological formation, part of a formation, or a group of formations that limits fluid movement above the injection zone. The confining zone or zones are listed in TABLE 2.3.

The 190-foot (3310 - 3500 feet) shale Confining Zone overlies the top of the Garden Gulch Member.

# TABLE 2.3 CONFINING ZONES Federal 1-13-9-17

Formation Name	Formation Lithology	Top (ft)	Base (ft)
Upper Green River Shale	Shale.	3,310	3,500

#### Underground Sources of Drinking Water (USDWs) (TABLE 2.4)

Aquifers or the portions thereof which contain less than 10,000 mg/l total dissolved solids (TDS) and are being or could in the future be used as a source of drinking water are considered to be USDWs. The USDWs in the area of this facility are identified in TABLE 2.4.

Throughout the Greater Monument Butte Field area undergoing enhanced oil recovery operations, water analyses of the Green River Formation generally exhibit total dissolved solids (TDS) content well in excess of 10,000 mg/l. However, some recent water analyses from the field showed lower TDS values closer to 10,000 mg/l. While rain and surface water recharge into Green River Formation outcrops further south along the Book Cliffs/Roan Cliffs in effect "freshens" the Green River Formation water near those outcrops, in this area of the Monument Butte Field the observed occasional 'freshening' is ascribed to the effective dilution of the originally in-place high TDS water from injection of relatively fresh water for enhanced oil recovery operations. Water samples from deeper Mesaverde Formation sands in the nearby Natural Buttes Unit yield highly saline water.

The State of Utah Division of Water Rights identifies no public water supply wells within the onequarter (1/4) mile Area-of-Review (AOR) around the Federal No. 1-13-9-17. Technical Publication No. 92: State of Utah, Department of Natural Resources, cites the base of Underground Sources of Drinking Water (USDW) in the Uinta Formation approximately 405 feet from the surface. However, absent definitive information relative to the water quality of the Uinta Formation, from the depth of 405 feet to the base of the Uinta Formation (763 feet), the EPA will require, during plugging and abandonment, a cement plug at the base of the Uinta Formation to protect contamination of possible Uinta USDWs.

# TABLE 2.4 UNDERGROUND SOURCES OF DRINKING WATER (USDW) Federal 1-13-9-17

Formation Name Formation Lithology			Top (ft)	Base (ft)	TDS (mg/l)	
Uinta: USDW	Sand and shale.	٠.	12	417	< 10,000	

#### PART III. Well Construction (40 CFR 146.22)

#### See diagram.

The Federal No. 1-13-9-17 was drilled to a total depth of 5615 feet (KB) feet in the Douglas Creek Member of the Green River Formation.

Surface casing (8-5/8 inch) was set at a depth of 315 feet in a 12-1/4 inch hole using 160 sacks of Class "G" cement which was circulated to the surface.

Production casing (5-1/2 inch) was set at a depth of 5601 feet (KB) in a 7-7/8 inch hole with 350 sacks of Premium Lite II and 450 sacks of 50/50 poz mix. This well construction is considered adequate to protect USDWs.

The EPA calculates the top of cement as 430 feet from the surface. The Cement Bond Log (CBL) identifies top of cement at 170 feet. CBL analysis identified 64 feet of 80% index cement bond within the confining zone.

The schematic diagram shows proposed enhanced recovery injection perforations in the Douglas Creek Member of the Green River Formation. Additional perforations may be added at a later time between the depths of 3500 feet and the top of the Wasatch Formation (Estimated to be 5775 feet) provided the operator first notifies the Director and later submits an updated well completion report (EPA Form 7520-12) and schematic diagram.

The packer will be set no higher than 100 feet above the top perforation.

## TABLE 3.1 WELL CONSTRUCTION REQUIREMENTS

Federal 1-13-9-17

Casing Type	Hole Size (in)	Casing Size (in)	Cased Interval (ft)	Cemented Interval (ft)
Surface	12.25	8.63	12 - 315	12 - 315
Production	2.88	5.50	315 - 5,601	170 - 5,601

The approved well completion plan will be incorporated into the Permit as APPENDIX A and will be binding on the Permittee. Modification of the approved plan is allowed under 40 CFR 144.52(a)(1) provided written approval is obtained from the Director prior to actual modification.

#### Casing and Cementing (TABLE 3.1)

The well construction plan was evaluated and determined to be in conformance with standard practices and guidelines that ensure well injection does not result in the movement of fluids into USDWs. Well construction details for this "new" injection well is shown in TABLE 3.1.

Remedial cementing may be required if the casing cement is shown to be inadequate by cement bond log or other demonstration of Part II (External) mechanical integrity.

#### **Tubing and Packer**

Injection tubing is required to be installed from a packer up to the surface inside the well casing. The packer will be set above the uppermost perforation. The tubing and packer are designed to prevent injection fluid from coming into contact with the outermost casing.

#### **Tubing-Casing Annulus (TCA)**

The TCA allows the casing, tubing and packer to be pressure-tested periodically for mechanical integrity, and will allow for detection of leaks. The TCA will be filled with fresh water treated with a corrosion inhibitor or other fluid approved by the Director.

The tubing-casing annulus must be kept closed at all times so that it can be monitored as required under conditions of the Permit.

#### **Monitoring Devices**

The permittee will be required to install and maintain wellhead equipment that allows for monitoring pressures and providing access for sampling the injected fluid. Required equipment may include but is not limited to: 1) shut-off valves located at the wellhead on the injection tubing and on the TCA; 2) a flow meter that measures the cumulative volume of injected fluid; 3) fittings or pressure gauges attached to the injection tubing and the TCA for monitoring the injection and TCA pressure; and 4) a tap on the injection line, isolated by shut-off valves, for sampling the injected fluid.

All sampling and measurement taken for monitoring must be representative of the monitored activity.

#### PART IV. Area of Review, Corrective Action Plan (40 CFR 144.55)

	AOR ANI	TABLE 4.1 D CORRECTIVE A	CTION		
Well Name	Туре	Status (Abandoned Y/N)	Total Depth (ft)	TOC Depth (ft)	CAP Required (Y/N)
Federal 2-13-9-17	Producer	No	5,725	30	No
Federal 8-13-9-17	Producer	No	5,667	80	No

TABLE 4.1 lists the wells in the Area of Review ("AOR") and shows the well type, operating status, depth, top of casing cement ("TOC") and whether a Corrective Action Plan ("CAP") is required for the well.

#### **Area Of Review**

Applicants for Class I, II (other than "existing" wells) or III injection well Permits are required to identify the location of all known wells within the injection well's Area of Review (AOR) which penetrate the injection zone, or in the case of Class II wells operating over the fracture pressure of the formation, all known wells within the area of review that penetrate formations which may be affected by increased pressure. Under 40 CFR 146.6 the AOR may be a fixed radius of not less than one quarter (1/4) mile or a calculated zone of endangering influence. For Area Permits, a fixed width of not less than one quarter (1/4) mile for the circumscribing area may be used.

#### **Corrective Action Plan**

For wells in the AOR which are improperly sealed, completed, or abandoned, the applicant shall develop a Corrective Action Plan (CAP) consisting of the steps or modifications that are necessary to prevent movement of fluid into USDWs.

The CAP will be incorporated into the Permit as APPENDIX F and become binding on the permittee.

PART V. Well Operation Requirements (40 CFR 146.23)

INJEC	TABLE 5.1 Federal 1-13-9-17	RES	
Formation Name	Depth Used to Calculate MAIP (ft)	Fracture Gradient (psi/ft)	Initial MAIP (psi)
Green River Formation	3,965	0.670	910

#### **Approved Injection Fluid**

The approved injection fluid is limited to Class II injection well fluids pursuant to 40 CFR § 144.6(b). For disposal wells injecting water brought to the surface in connection with natural gas storage operations, or conventional oil or natural gas production, the fluid may be commingled and the well used to inject other Class II wastes such as drilling fluids and spent well completion, treatment and stimulation fluid. Injection of non-exempt wastes, including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes, and vacuum truck and drum rinsate from trucks and drums transporting or containing non-exempt waste, is prohibited.

The proposed injectate will be a blend of drinking-quality water from the Johnson Water District supply line and/or water from the Green River supply line, as well as Green River Formation water from wells proximate to the Federal No. 1-13-9-17 and mixed at the Beluga Injection Facility.

#### Injection Pressure Limitation

Injection pressure, measured at the wellhead, shall not exceed a maximum calculated to assure that the pressure used during injection does not initiate new fractures or propagate existing fractures in the confining zones adjacent to the USDWs.

There will be no restrictions on the cumulative volume or daily volume of authorized Class II fluid to be injected into the approved Green River Formation Interval. The Permittee shall not exceed the maximum authorized injection pressure.

The applicant submitted injection fluid density and injection zone data which was used to calculate a formation fracture pressure and to determine the maximum allowable injection pressure (MAIP), as measured at the surface, for this Permit.

TABLE 5.1 lists the fracture gradient for the injection zone and the approved MAIP, determined according to the following formula:

$$FP = [fg - (0.433 * sg)] * d$$

FP = formation fracture pressure (measured at surface)

fg = fracture gradient (from submitted data or tests)

sg = specific gravity (of injected fluid)

d = depth to top of injection zone (or top perforation)

#### **Injection Volume Limitation**

Cumulative injected fluid volume limits are set to assure that injected fluids remain within the boundary of the exempted area. Cumulative injected fluid volume is limited when injection occurs into an aquifer that has been exempted from protection as a USDW.

#### Mechanical Integrity (40 CFR 146.8)

An injection well has mechanical integrity if:

1. there is no significant leak in the casing, tubing, or packer (Part I); and

2. there is no significant fluid movement into a USDW through vertical channels adjacent to the injection well bore (Part II).

The Permit prohibits injection into a well which lacks mechanical integrity.

The Permit requires that the well demonstrate mechanical integrity prior to injection and periodically thereafter. A demonstration of mechanical integrity includes both internal (Part I) and external (Part II). The methods and frequency for demonstrating Part I and Part II mechanical integrity are dependent upon well-specific conditions as explained below.

Well construction and site-specific conditions dictate the following requirements for Mechanical Integrity (MI) demonstrations:

PART I MI: Internal MI will be demonstrated prior to beginning injection. Since this well is constructed with a standard casing, tubing, and packer configuration, a successful mechanical integrity test (MIT) is required to take place at least once every five (5) years. A demonstration of Part I MI is also required prior to resuming injection following any workover operation that affects the casing, tubing, or packer. Part I MI may be demonstrated by a standard tubing-casing annulus pressure test using the maximum permitted injection pressure or 1000 psi, which ever is less, with a ten (10) percent or less pressure loss over thirty (30) minutes.

### PART VI. Monitoring, Recordkeeping and Reporting Requirements

#### **Injection Well Monitoring Program**

At least once a year the permittee must analyze a sample of the injected fluid for total dissolved solids (TDS), specific conductivity, pH, and specific gravity. This analysis shall be reported to EPA annually as part of the Annual Report to the Director. Any time a new source of injected fluid is added, a fluid analysis shall be made of the new source.

Instantaneous injection pressure, injection flow rate, cumulative fluid volume and TCA pressures must be observed on a weekly basis. A recording, at least once every thirty (30) days, must be made of the injection pressure, annulus pressure, monthly injection flow rate and cumulative fluid volume. This information is required to be reported annually as part of the Annual Report to the Director.

Permit UT21063-07192 12 FINAL PERMIT Statement of Basis

#### PART VII. Plugging and Abandonment Requirements (40 CFR 146.10)

The well shall be plugged in a manner that isolates the injection zone and prevents the movement of fluid into or between USDWs and in accordance with other applicable Federal, State or local law or regulation. Tubing, packers, and any downhole apparatus shall be removed. Class A, C, G, and H cements, with additives such as accelerators and retarders that control or enhance cement properties, may be used for plugs. However, volume extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.2 lb/gal shall be placed between all plugs. Within sixty (60) days after plugging, the owner or operator shall submit Plugging Record (EPA Form 7520-13) to the Director. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. At a minimum, the following plugs are required:

PLUG NO. 1: Seal the Injection Zone: Set a cast iron bridge plug (CIBP) no more than 50 feet above the top perforation. Place at least 20 feet of cement plug on top of the CIBP.

PLUG NO. 2: Seal the Mahogany Shale and Trona intervals: Perforate and squeeze a cement plug up the backside of the 5-1/2 inch casing across the Trona Zone and the Mahogany Shale from approximately 2632 to 2792 feet (KB) unless pre-existing backside cement prevents cement-squeezing this interval. Set a minimum 160-foot balanced cement plug inside the 5-1/2 inch casing across the Trona Zone and the Mahogany Shale, approximately 2632 to 2792 feet (KB). Both the cement-squeeze and the plug must extend from a minimum of 50 feet above the top of the Trona-Bird's Nest to a minimum of 50 feet below the base of the Mahogany Shale.

PLUG NO. 3: Seal possible USDWs by isolating the Uinta Formation from the Green River Formation: Perforate and squeeze cement up the backside of the 5-1/2 inch casing from approximately 1118 to 1218 feet (KB) unless pre-existing backside cement prevents cement-squeezing this interval. Set a minimum 100-foot, balanced cement plug inside the 5-1/2 inch casing centered at the contact between the Uinta Formation and the Green River Formation at 1168 feet (KB). Both the cement-squeeze and the plug should extend from a minimum of 50 feet above the contact at 1168 feet (KB) to a minimum of 50 feet below the contact at 1168 feet.

PLUG NO.4: Seal surface casing: Set a Class "G" cement plug within the 5-1/2 inch casing to 552 feet and up the 5-1/2 inch by 8-5/8 inch casings annulus to the surface.

See Schematic Diagram.

#### Plugging and Abandonment Plan

Prior to abandonment, the well shall be plugged in a manner that isolates the injection zone and prevents movement of fluid into or between USDWs, and in accordance with any applicable Federal, State or local law or regulation. Tubing, packer and other downhole apparatus shall be removed. Cement with additives such as accelerators and retarders that control or enhance cement properties may be used for plugs; however, volume-extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.6 lb/gal shall be placed between all plugs. A minimum 50 ft surface plug shall be set inside and outside of the surface casing to seal pathways for fluid migration into the subsurface. Within sixty (60) days after plugging the owner or operator shall submit Plugging Record (EPA Form 7520 13) to the Director. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. The plugging and abandonment plan is described in Appendix E of the Permit.

### PART VIII. Financial Responsibility (40 CFR 144.52)

#### **Demonstration of Financial Responsibility**

The permittee is required to maintain financial responsibility and resources to close, plug, and abandon the underground injection operation in a manner prescribed by the Director. The permittee shall show evidence of such financial responsibility to the Director by the submission of a surety bond, or other adequate assurance such as financial statements or other materials acceptable to the Director. The Regional Administrator may, on a periodic basis, require the holder of a lifetime permit to submit a revised estimate of the resources needed to plug and abandon the well to reflect inflation of such costs, and a revised demonstration of financial responsibility if necessary. Initially, the operator has chosen to demonstrate financial responsibility with:

Financial Statement that has been reviewed and approved by the EPA.

Financial Statement received May 16, 2008.

Financial Statement, received May 16, 2008

Evidence of continuing financial responsibility is required to be submitted to the Director annually.

#### STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING				5. LEASE DESIGNATION AND SERIAL NUMBER: USA UTU-39713	
SUNDRY	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:				
	Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.				
1. TYPE OF WELL: OIL WELL	8. WELL NAME and NUMBER: FEDERAL 1-13-9-17				
2. NAME OF OPERATOR:					
NEWFIELD PRODUCTION COM	IPANY			4304735704	
3. ADDRESS OF OPERATOR:	M ( )	84053	PHONE NUMBER	10. FIELD AND POOL, OR WILDCAT:	
Route 3 Box 3630  4. LOCATION OF WELL:	CITY Myton STATE UT	ZIP 84052	435.646.3721	MONUMENT BUTTE	
FOOTAGES AT SURFACE: 660 FNL 66	60 FEL			COUNTY: UINTAH	
OTR/OTR. SECTION. TOWNSHIP, RANGE.	MERIDIAN: NENE, 13, T9S, R17E			STATE: UT	
	<u> </u>		· ·	**************************************	
CHECK APPROL	PRIATE BOXES TO INDICATI	E NATURE C	OF NOTICE, REF	PORT, OR OTHER DATA	
TYPE OF SUBMISSION		TY	PE OF ACTION		
	ACIDIZE	DEEPEN	·	REPERFORATE CURRENT FORMATION	
NOTICE OF INTENT (Submit in Duplicate)	ALTER CASING	☐ FRACTURE T	DEAT	SIDETRACK TO REPAIR WELL	
	CASING REPAIR	NEW CONSTI		TEMPORARITLY ABANDON	
Approximate date work will		=			
	CHANGE TO PREVIOUS PLANS	OPERATOR C		TUBING REPAIR	
_	CHANGE TUBING	PLUG AND A	BANDON	☐ VENT OR FLAIR	
SUBSEOUENT REPORT (Submit Original Form Only)	CHANGE WELL NAME	PLUG BACK		WATER DISPOSAL	
	X CHANGE WELL STATUS	PRODUCTION	N (START/STOP)	WATER SHUT-OFF	
Date of Work Completion:	COMMINGLE PRODUCING FORMATIONS	RECLAMATI	ON OF WELL SITE	OTHER: -	
03/30/2009	X CONVERT WELL TYPE	RECOMPLET	E - DIFFERENT FORMATION		
	MPLETED OPERATIONS. Clearly show a			, volumes, etc.	
On 4/1/09 Margo Smith wit time to perform the test on	4/2/09. On 4/2/09 the csg was presecting during the test. The tbg press	g the initial MIT ssured up to 12	on the above liste 50 psig and charted	d well. Permission was given at that d for 30 minutes with no pressure there was not an EPA representative	
EPA# UT21063-07192	API# 43-047-35704				
		entropy of the second of the s	Accepted to Utah Division, Gas and TOR RECOR	ion of Mining	
NAME (PLEASE PRINT) Callie Ross		1	TITLE Production Clerk		
SIGNATURE MORS F	Zost	-	04/07/2009		
SIGNATURE COLORS F		L	DATE04/07/2009		

(This space for State use only)

**RECEIVED** 

APR 1 3 2009

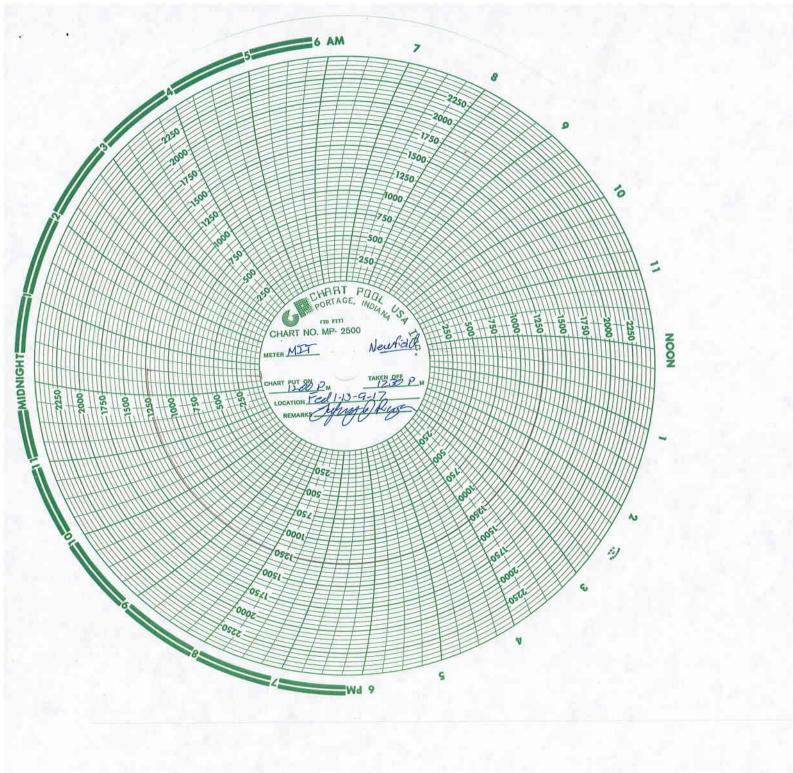
## Mechanical Integrity Test Casing or Annulus Pressure Mechanical Integrity Test U.S. Environmental Protection Agency Underground Injection Control Program 999 18th Street, Suite 500 Denver, CO 80202-2466

EPA Witness:		_	Date:	4/2	12009	ā.
EPA Witness:	fless D	Ruz	-			
Others present:	/					
Well Name: Fed 1-13	3-9-17		Type: ER SWI	) Stat	us: AC TA	UC
Field: Monumen	T Butte			12 ATC	La Chantari	17
Location: NE/NE Sec	13 1 9 1	N (S) R_1_	W County:	VIVIIA	M_State:	<del>''</del>
Operator: Newfice Last MIT: /	/ Max	imum Allow	able Pressure		PS	IG
Last Will/	/ Wax	man Anow	<u></u>			
Is this a regularly scheduled	d test?	Yes [>	] No			
Initial test for permit?	[X	Yes [				
Test after well rework?		Yes [ >	J No		×	13
Well injecting during test?	[ ]	Yes 🔀	] No If Yes.	, rate:	<u> </u>	_ bpd
Pre-test casing/tubing annulu	is pressure:	×	2 · p	sig		
1 10-test ousing/tuoing amara	.s pressure.		, , , , , , , , , , , , , , , , , , ,			
MIT DATA TABLE	Test #1		Test #2		Test	#3
TUBING	PRESSURE					
Initial Pressure	55	psig		psig		psig
End of test pressure	55	psig		psig		psig
CASING / TUBING	ANNULUS		PRESSURE		T	·
0 minutes	1250	psig		psig		psig
5 minutes	1250	psig		psig	·	psig
10 minutes	1250	psig		psig		psig
15 minutes	1250	psig		psig		psig
20 minutes	1750	psig		psig		psig
25 minutes	1250	psig		psig		psig
30 minutes	1250	psig		psig		psig 
minutes		psig		psig		psig
minutes		psig		psig		psig
RESULT	[×] Pass	[ ]Fail	Pass	[ ]Fail	[ ] Pass	[ ]Fail
Does the annulus pressure bu	ild back up after	r the test?	[ ] Yes	[ / No		

MECHANICAL INTEGRITY PRESSURE TEST

Additional comments for mechanical integrity pressure test, such as volume of fluid added to annulus and bled back at end of test, reason for failing test (casing head leak, tubing leak, other), etc.:

Signature of Witness:_	



## FEDERAL 1-13-9-17 2/1/2009 To 6/30/2009

#### 3/28/2009 Day: 1

Conversion

Leed #731 on 3/27/2009 - MIRU LEED #731. RD pumping unit. Wait on hot oiler. Pump 60 BW down csg @ 250°. Soft seat pump. Fill tbg w/ 15 BW & pump 1/4 BPM @ 1800 psi. Unseat pump. Flush tbg & rods w/ 40 BW @ 250°. Soft seat pump. Fill tbg & pressure test tbg to 3000 psi. LD rods as follows: 1 1/2" X 22' polished rod, 1-6',8' X 3/4" pony rods, 99- 3/4" guided rods, 73- 3/4" plain rods, 35- 3/4" guided rods, 6- 1 1/2" weight rods & 2 1/2" X 1 1/2" X 15 1/2' RHAC ord pump. Flush tb & rods w/ additional 20 BW @ 250 during TOOH. X-over for rods. ND wellhead. Release TA. NU BOPs. RU rig floor. TOOH w/ 40- jts 2 7/8" J-55 tbg (talleying, breaking collars & applying Liquid O-ring to threads). SDFN.

#### 3/31/2009 Day: 2

Conversion

Leed #731 on 3/30/2009 - TOOH w/ 81- jts tbg (talleying, breaking collars & applying Liquid O-ring to threads). Flush tbg w/ 20 BW @ 250°. LD 45- jts 2 7/8" tbg. PU Arrowset 1-X packer & SN. TIH w/ 121- jts 2 7/8" J-55 6.5# 8rd EUE tbg. Pressure test tbg 3 times during TIH. Final pressure test of 3000 psi held for 30 min w/ 0 psi loss. RU sandline. RIH w/ fishing tool on sandline & retrieve standing valve. RD rig floor. ND BOPs. Pump 50 bbls packer fluid down tbg-csg annulus. Set packer w/ CE @ 3896.56' w/ 15,000# tension. NU wellhead. Fill annulus w/ 25 bbls packer fluid. Pressure test annulus to 1400 psi. Held pressure test for 30 minutes w/ 0 psi loss. Ready for MIT!

#### 4/3/2009 Day: 3

Conversion

Rigless on 4/2/2009 - On 4/1/09 Margo Smith with the EPA was contacted concerning the initial MIT on the above listed well (Fed 1-13-9-17). Permission was given at that time to perform the test on 4/2/09. On 4/2/09 the csg was pressured up to 1250 psig and charted for 30 minutes with no pressure loss. The well was not injecting during the test. The tbg pressure was 55 psig during the test. There was not an EPA representative available to witness the test. EPA# UT21063-07192 API# 43-047-35704



### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 8

1595 Wynkoop Street DENVER, CO 80202-1129 Phone 800-227-8917 http://www.epa.gov/region08

Ref: 8P-W-GW

APR 23 2009

#### <u>CERTIFIED MAIL</u> <u>RETURN RECEIPT REQUESTED</u>

Michael Guinn
District Manager
Newfield Production Company
Route 3 - Box 3630
Myton, UT 84052

RECEIVED
APR 27 2009

DIV. OF OIL, GAS & MINING

RE: Authorization to Commence Injection EPA UIC Permit UT21063-07192 Well: Federal 1-13-9-17 NE/NE Section 13 T9S R17E Uintah County, Utah API #: 43-047-35704

Dear Mr. Guinn:

Newfield Production Company (Newfield) has satisfactorily completed Environmental Protection Agency (EPA) Prior to Commencing Injection requirements for Final Permit UT21063-07192, effective March 3, 2009. The Part I (Internal) Mechanical Integrity Test (MIT), Well Rework Record (EPA Form No. 7520-12), schematic diagram, and pore pressure, were reviewed and approved by EPA on April 20, 2009.

As of the date of this letter, Newfield is authorized to commence injection into Federal 1-13-9-17 at a maximum allowable injection pressure (MAIP) of 910 psig. Until such time as the Permittee demonstrates through a Step Rate Test (SRT) that the Fracture Gradient (FG) is other than 0.67 psi/ft, Federal 1-13-9-17 shall be operated at a MAIP no greater than 910 psig.

As of this approval, responsibility for permit compliance and enforcement is transferred to Region 8 UIC Technical Enforcement Program office. Therefore, please direct all monitoring and compliance correspondence to the following address, referencing your well name and UIC Permit number on all correspondence regarding this well to:

Mr. Nathan Wiser
Technical Enforcement Program – UIC
U.S. EPA Region 8: Mail Code 8ENF-UFO
1595 Wynkoop Street
Denver, CO 80202-1129

Or, you may reach Mr. Wiser by telephone at 303-312-6211, or 1 800-227-8927, ext. 312-6211.

Please remember that it is your responsibility to be aware of and to comply with all conditions of injection well Permit UT21063-07192. If you have questions regarding the above action, please call Jason Deardorff at 303-312-6583 or 1-800-227-8917, ext. 312-312-6583.

Sincerely,

Bddie A. Sierra

Acting Assistant Regional Administrator Office of Partnerships and Regulatory Assistance

cc:

Uintah & Ouray Business Committee Curtis Cesspooch, Chairman Ronald Groves, Councilman Irene Cuch, Vice-Chairwoman Steven Cesspooch, Councilman Phillip Chimburas, Councilman Frances Poowegup, Councilwoman

Daniel Picard BIA - Uintah & Ouray Indian Agency

Ferron Secakuku Director, Natural Resources Ute Indian Tribe

Larry Love
Director of Energy & Minerals Dept.
Ute Indian Tribe

Gil Hunt Associate Director Utah Division of Oil, Gas, and Mining Fluid Minerals Engineering Office BLM - Vernal Office

Eric Sundberg Regulatory Analyst Newfield Exploration Company



## UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED OMB No. 1004-0137 Expires: July 31,2010

SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.  SUBMIT IN TRIPLICATE - Other Instructions on page 2				USA UTU-39713 6. If Indian, Allotte 7. If Unit or CA/Ag SUNDANCE UN	greement, Name and/or
	☑ Oil Well ☐ Gas Well ☐ Other				No.
<ol><li>Name of Operator NEWFIELD PRODUCTION C</li></ol>	COMPANY			FEDERAL 1-13-9	<del></del>
3a. Address Route 3 Box 3630		3b. Phone (include are	code)	9. API Well No. 4304735704	
Myton, UT 84052		435,646,3721			or Exploratory Area
, ,	Sec., T., R., M., or Survey Desc	cription)		MONUMENT BU	
660 FNL 660 FEL				11. County or Paris	sh, State
NENE Section 13 T9S R17E				UINTAH, UT	
12. CHEC	K APPROPRIATE BOX	(ES) TO INIDICATE NA	TURE OF	NOTICE, OR OTH	HER DATA
TYPE OF SUBMISSION		ТҮР	E OF ACTIO	)N	
✓ Notice of Intent  ☐ Subsequent Report  ☐ Final Abandonment	☐ Acidize ☐ Alter Casing ☐ Casing Repair ☐ Change Plans ☑ Convert to Injector	Deepen Fracture Treat New Construction Plug & Abandon Plug Back	Reclan Recom	-	Water Shut-Off Well Integrity Other Change status put well on injection.
Bond under which the work will be of the involved operations. If the of Final Abandonment Notices shall be inspection.)	poperation: (Clearly state all pertinent or recomplete horizontally, give sub- performed or provide the Bond No. operation results in a multiple comple- be filed only after all requirements, in all was put on injection at 1	surface locations and measured and on file with BLM/BIA. Required : stion or recompletion in a new inter acluding reclamation, have been con	true vertical deg subsequent repor val, a Form 3160	oths of all pertinent markers ts shall be filed within 30 d 0-4 shall be filed once testin	s and zones. Attach the lays following completion ng has been completed.

Oil, Gas and Mining

FOR RECORD ONLY

I hereby certify that the foregoing is true and correct (Printed/ Typed) Kathy Chapman	Title Office Manager		
Signature Souther Uses	Date 05/05/2009		
THIS SPACE FOR FEI	DERAL OR STATE OFFIC	E USE	
Approved by	Title	Date	
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.			
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any p States any false, fictitious and fraudulent statements or representations as to any matter w	person knowingly and willfully tomake to within its jurisdiction	Control of the United	

(Instructions on page 2)

#### STATE OF UTAH

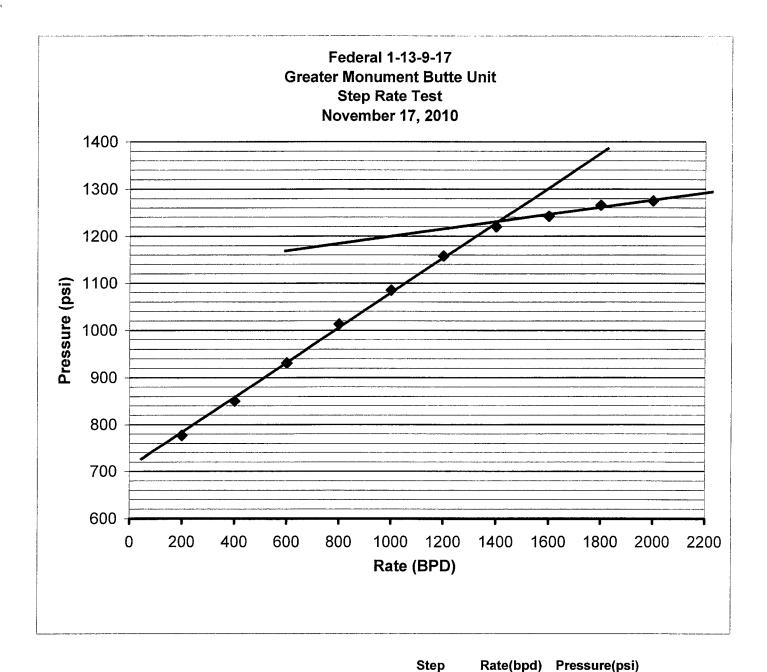
	5. LEASE DESIGNATION AND SERIAL NUMBER: USA UTU-39713			
SUNDRY	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:			
	rill new wells, significantly deepen existing wells be tal laterals. Use APPLICATION FOR PERMIT TO			7. UNIT OF CA AGREEMENT NAME: GMBU
1. TYPE OF WELL: OIL WELL	8. WELL NAME and NUMBER: FEDERAL 1-13-9-17			
2. NAME OF OPERATOR:	. · . ·			9. API NUMBER:
NEWFIELD PRODUCTION COM	MPANY		T	4304735704
3. ADDRESS OF OPERATOR: Route 3 Box 3630	CITY Myton STATE UT	ZIP 84052	PHONE NUMBER 435.646.3721	10. FIELD AND POOL, OR WILDCAT: GREATER MB UNIT
4. LOCATION OF WELL: FOOTAGES AT SURFACE: 660 FNL 6				COUNTY: UINTAH
OTR/OTR. SECTION, TOWNSHIP, RANGE	MERIDIAN: NENE, 13, T9S, R17E			STATE: UT
11. CHECK APPRO	PRIATE BOXES TO INDICATI	E NATURE (	OF NOTICE, REPO	RT, OR OTHER DATA
TYPE OF SUBMISSION		TY	PE OF ACTION	
	ACIDIZE	DEEPEN		REPERFORATE CURRENT FORMATION
NOTICE OF INTENT (Submit in Duplicate)	ALTER CASING	FRACTURE T	REAT	SIDETRACK TO REPAIR WELL
Approximate date work will	CASING REPAIR	NEW CONST	RUCTION	TEMPORARITLY ABANDON
	CHANGE TO PREVIOUS PLANS	OPERATOR O	CHANGE	TUBING REPAIR
	CHANGE TUBING	PLUG AND A	BANDON	VENT OR FLAIR
SUBSEQUENT REPORT	CHANGE WELL NAME	PLUG BACK		WATER DISPOSAL
(Submit Original Form Only)	CHANGE WELL STATUS	PRODUCTIO	N (START/STOP)	WATER SHUT-OFF
Date of Work Completion;	COMMINGLE PRODUCING FORMATIONS	RECLAMATI	ON OF WELL SITE	OTHER: - Step Rate Test
11/17/2010	CONVERT WELL TYPE	RECOMPLET	E - DIFFERENT FORMATION	
A step rate test was condu	DMPLETED OPERATIONS. Clearly show a acted on the subject well on Novemb ewfield is requesting that the maximu	er 17,2010. Re	esults from the test inc	dicate that the fracture gradient is
EPA: UT21063-07192 A	Pl: 43-047-35704			
		I Jt	ccepted by the ah Division of Gas and Mining	
		FOR F	RECORD ONI	Y
NAME (PLEASE PRINT) Lucy Chavez-1	Naupoto	1	TITLE Administrative Assi	stant
SIGNATURE Street	2 Pos		DATE 12/01/2010	

(This space for State use only)

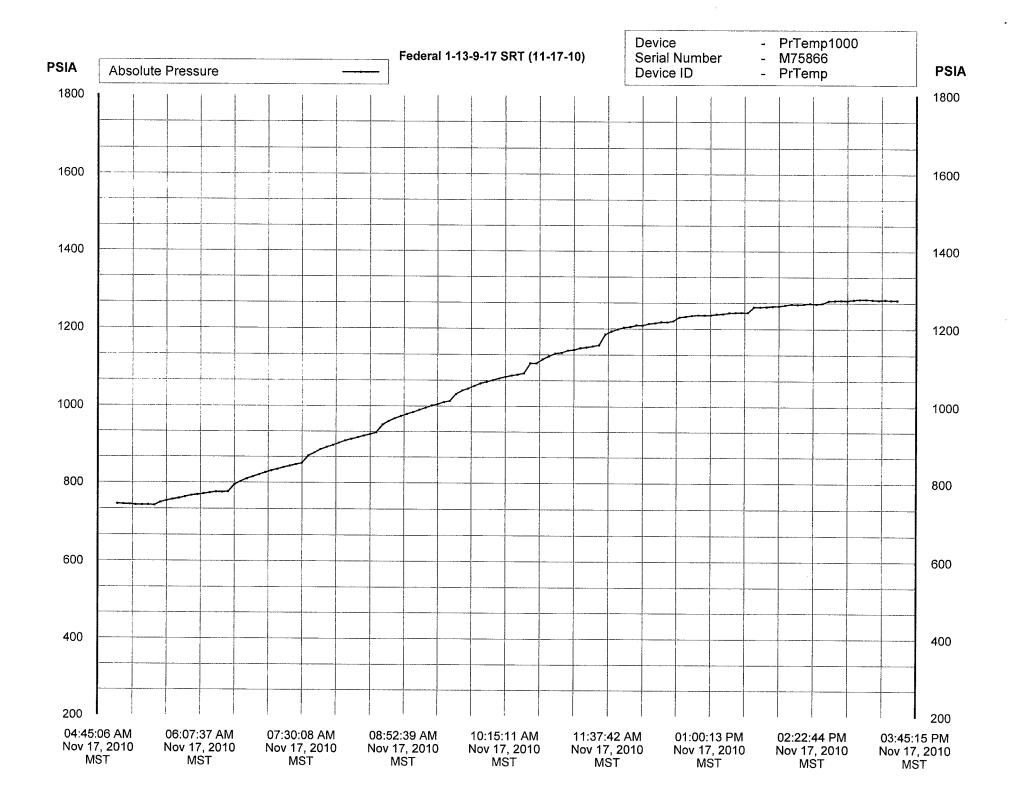
RECEIVED
DEC 0 2 2010

## Step Rate Test (SRT) Analysis

Date: 11/18/2010	Operator:	Newfield Pro	oduction Co	ompany		
	Well:	Federal 1-13	eral 1-13-9-17			
	Permit #:			T21063-07192		
Enter the	following data :					
	Specific Gra	avity (sg) of injectate =	1.015	g/cc		
	Depth to	top perforation (D) = $\overline{}$	3965	feet	39	
Top of permitted injection zone de	pth (blank=use top perford	ation to calculate $fg$ ) =		feet		
Estimated Form	nation Parting Pressure (P)	fp) from SRT chart =	1230	psi		
Inst	antaneous Shut In Pressur	re (ISIP) from SRT =	1209	psi	1230	
Bottom Hole Parting Pr	ressure (Pbhp) from downho	ole pressure recorder =		psi psi	no downh	
Part One - Calculation	of Fracture Grace Calculated Fract		0.745	psi/ft.		
	Calculated Fract	t <b>ure Gradient =</b> wbere: fg = Pbbp / D (Note: this formula n			ble) = 1209	
Part One - Calculation  D = depth used = 3965	Calculated Fract	rure Gradient =			bls) = 1209	
D = depth used = 3965	Calculated Fract	t <b>ure Gradient =</b> wber: fg = Pbhp / D (Note: this formula n bp used = 2952			ble) = 1209 2951.59	
D = depth used = 3965	Calculated Fract Phi ottom Hole Parting F	t <b>ure Gradient =</b> wber: fg = Pbhp / D (Note: this formula n bp used = 2952	ses the downbole recorded botto.	m bole parting pressure if availa		
D = depth used = 3965	Calculated Fract Phi ottom Hole Parting F	ture Gradient =  where: fg = Phhp / D (Note: this formula n  hp used = 2952  Pressure (Phhp) =	ses the downbole recorded botto.	m bole parting pressure if availa		
D = depth used = 3965	Calculated Fract Phi  Pottom Hole Parting F  to calculate Bottom Hole Parting Pres	ture Gradient =  where: fg = Phhp / D (Note: this formula n  hp used = 2952  Pressure (Phhp) =	ses the downbole recorded botto.	m bole parting pressure if availa		
D = depth used = 3965	Calculated Fract Pbi  Pottom Hole Parting F  to calculate Bottom Hole Parting Press  (Uses lesser of ISIP or Pfp) Valu	ture Gradient =  where: fg = Phhp / D (Note: this formula n  hp used = 2952  Pressure (Phhp) =	ses the downbole recorded botto. <b>2952</b> (SIP or Pfp) + (0.433 * SG	m hole parting pressure if availa  psi  Dsi		
D = depth used = 3965 <b>Calculated Bo</b>	Calculated Fract Pbi  Ottom Hole Parting F  to calculate Bottom Hole Parting Press  (Uses lesser of ISIP or Pfp) Value  of Maximum A	ture Gradient =  where: fg = Phhp / D (Note: this formula note that the pused = 2952  Pressure (Phhp) =	ses the downbole recorded botto. <b>2952</b> (SIP or Pfp) + (0.433 * SG	m hole parting pressure if availa  psi  Dsi		



Start Pressure:	742	psi	1	200	777
Instantaneous Shut In Pressure (ISIP):	1209	psi	2	400	850
Top Perforation:	3965	feet	3	600	931
Fracture pressure (Pfp):	1230	psi	4	800	1013
FG:	0.750	psi/ft	5	1000	1085
			6	1200	1158
			7	1400	1220
			8	1600	1242
			9	1800	1266
			10	2000	1275



Report Name: Report Date: File Name: PrTemp1000 Data Table

Nov 18, 2010 09:13:48 AM MST
C:\Program Files\PTC® Instruments 2.00\Federal 1-13-9-17 SRT (11-17-10).csv
Federal 1-13-9-17 SRT (11-17-10)
PrTemp1000 - Temperature and Pressure Recorder

Title:

Device:

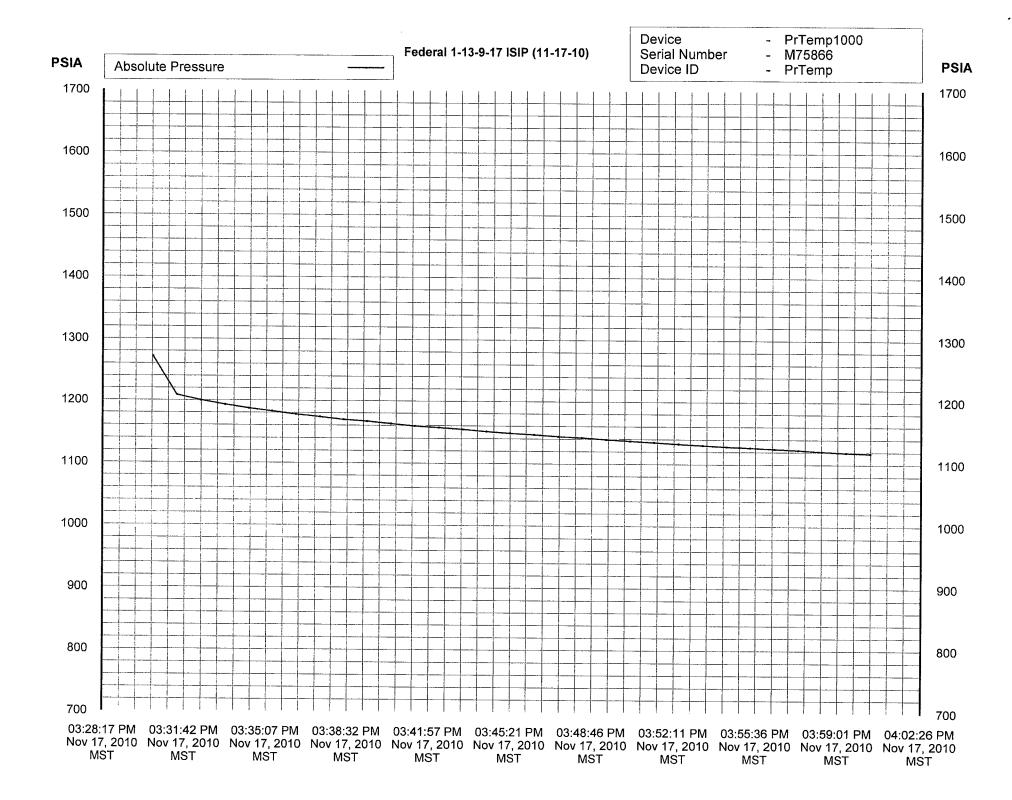
REV2C (64K) M75866 Hardware Revision: Serial Number: Device ID:

PrTemp Nov 17, 2010 05:00:10 AM MST Data Start Date: Data End Date: Nov 17, 2010 03:30:11 PM MST

Reading Rate: Readings: Last Calibration Date: 2 Seconds 1 to 127 of 127 May 22, 2009 May 22, 2010 Next Calibration Date:

<u>Rea</u>	ding	Date and Time (MST)	Absolute Pressure	Annotation	
	1	Nov 17, 2010 05:00:10 AM	745.400 PSIA		
	2	Nov 17, 2010 05:05:11 AM	744.600 PSIA		
	3 4	Nov 17, 2010 05:10:10 AM Nov 17, 2010 05:15:10 AM	744.200 PSIA 742.800 PSIA		
	5	Nov 17, 2010 05:13:10 AM	742.400 PSIA		
	6	Nov 17, 2010 05:25:10 AM	742.800 PSIA		
	7	Nov 17, 2010 05:30:10 AM	741.800 PSIA		
	8 9	Nov 17, 2010 05:35:10 AM Nov 17, 2010 05:40:10 AM	749.400 PSIA		
	10	Nov 17, 2010 05:45:10 AM Nov 17, 2010 05:45:10 AM	753.600 PSIA 757.000 PSIA		
	11	Nov 17, 2010 05:50:11 AM	760.000 PSIA		
	12	Nov 17, 2010 05:55:10 AM	763.400 PSIA		
	13	Nov 17, 2010 06:00:11 AM	767.200 PSIA		
	14 15	Nov 17, 2010 06:05:11 AM Nov 17, 2010 06:10:11 AM	769.000 PSIA 771.400 PSIA		
	16	Nov 17, 2010 06:15:11 AM	771.400 PSIA		
	17	Nov 17, 2010 06:20:15 AM	776.000 PSIA		
	18	Nov 17, 2010 06:25:11 AM	775.600 PSIA		
	19 20	Nov 17, 2010 06:30:10 AM	776.600 PSIA		
	20 21	Nov 17, 2010 06:35:10 AM Nov 17, 2010 06:40:10 AM	794.400 PSIA 802.600 PSIA		
	22	Nov 17, 2010 06:45:11 AM	809.800 PSIA		
	23	Nov 17, 2010 06:50:11 AM	815.000 PSIA		
	24	Nov 17, 2010 06:55:16 AM	820.600 PSIA		
	25 26	Nov 17, 2010 07:00:11 AM Nov 17, 2010 07:05:11 AM	826.000 PSIA 830.800 PSIA		
	27	Nov 17, 2010 07:03:11 AM	834.800 PSIA		
	28	Nov 17, 2010 07:15:11 AM	839.200 PSIA		
	29	Nov 17, 2010 07:20:11 AM	843.000 PSIA		
	30 31	Nov 17, 2010 07:25:11 AM	846.800 PSIA		
	32	Nov 17, 2010 07:30:11 AM Nov 17, 2010 07:35:11 AM	850.400 PSIA 869.000 PSIA		
	33	Nov 17, 2010 07:40:11 AM	877.400 PSIA		
	34	Nov 17, 2010 07:45:11 AM	886.400 PSIA		
	35 36	Nov 17, 2010 07:50:11 AM	892.200 PSIA		
	37	Nov 17, 2010 07:55:16 AM Nov 17, 2010 08:00:11 AM	897.400 PSIA 903.600 PSIA		
	38	Nov 17, 2010 08:05:12 AM	909.400 PSIA		
	39	Nov 17, 2010 08:10:11 AM	913.600 PSIA		
	40	Nov 17, 2010 08:15:11 AM	917.800 PSIA		
	41 42	Nov 17, 2010 08:20:11 AM Nov 17, 2010 08:25:11 AM	922.600 PSIA 926.600 PSIA		
	43	Nov 17, 2010 08:30:11 AM	930.800 PSIA		
	44	Nov 17, 2010 08:35:11 AM	951.000 PSIA		
	<b>45</b>	Nov 17, 2010 08:40:11 AM	960.600 PSIA		
	46 47	Nov 17, 2010 08:45:11 AM Nov 17, 2010 08:50:11 AM	968.000 PSIA 973.800 PSIA		
	48	Nov 17, 2010 08:55:11 AM	979.200 PSIA		
	49	Nov 17, 2010 09:00:11 AM	984.400 PSIA		
	50	Nov 17, 2010 09:05:11 AM	990.200 PSIA		
	51 52	Nov 17, 2010 09:10:11 AM	995.600 PSIA		
	52 53	Nov 17, 2010 09:15:11 AM Nov 17, 2010 09:20:12 AM	1001.200 PSIA 1005.000 PSIA		
	54	Nov 17, 2010 09:25:11 AM	1009.800 PSIA		
	55	Nov 17, 2010 09:30:11 AM	1013.000 PSIA		
	56	Nov 17, 2010 09:35:11 AM	1030.800 PSIA		
	57 58	Nov 17, 2010 09:40:11 AM Nov 17, 2010 09:45:13 AM	1040.800 PSIA 1046.000 PSIA		
	59	Nov 17, 2010 09:43:13 AM Nov 17, 2010 09:50:11 AM	1052.600 PSIA		
	60	Nov 17, 2010 09:55:11 AM	1058.800 PSIA		

, 61	Nov 17, 2010 10:00:11 AM	1063.000 PSIA
62	Nov 17, 2010 10:05:11 AM	
		1067.600 PSIA
63	Nov 17, 2010 10:10:11 AM	1072.200 PSIA
64	Nov 17, 2010 10:15:11 AM	1076.200 PSIA
65	Nov 17, 2010 10:20:11 AM	1079.200 PSIA
66	Nov 17, 2010 10:25:11 AM	1082.200 PSIA
67	Nov 17, 2010 10:30:11 AM	1085.400 PSIA
68	Nov 17, 2010 10:35:11 AM	1111.400 PSIA
69	Nov 17, 2010 10:40:11 AM	1111.600 PSIA
70	Nov 17, 2010 10:45:11 AM	1122.000 PSIA
71	Nov 17, 2010 10:50:11 AM	
		1129.600 PSIA
72	Nov 17, 2010 10:55:11 AM	1136.400 PSIA
73	Nov 17, 2010 11:00:11 AM	1138.400 PSIA
74	Nov 17, 2010 11:05:11 AM	1144.200 PSIA
75	Nov 17, 2010 11:10:11 AM	1145.800 PSIA
76	Nov 17, 2010 11:15:11 AM	1150.400 PSIA
77	Nov 17, 2010 11:20:11 AM	1152.200 PSIA
78	Nov 17, 2010 11:25:11 AM	1155.000 PSIA
79	Nov 17, 2010 11:30:11 AM	1158.200 PSIA
80	Nov 17, 2010 11:35:11 AM	
		1185.800 PSIA
81	Nov 17, 2010 11:40:11 AM	1193.400 PSIA
82	Nov 17, 2010 11:45:11 AM	1198.600 PSIA
83	Nov 17, 2010 11:50:11 AM	1203.200 PSIA
84	Nov 17, 2010 11:55:13 AM	1204.400 PSIA
85	Nov 17, 2010 12:00:11 PM	1209.000 PSIA
86	Nov 17, 2010 12:05:11 PM	1208.600 PSIA
87	Nov 17, 2010 12:10:11 PM	1213.000 PSIA
88	Nov 17, 2010 12:15:11 PM	1214.600 PSIA
89	Nov 17, 2010 12:20:11 PM	1217.600 PSIA
90	Nov 17, 2010 12:25:11 PM	1217.200 PSIA
91	Nov 17, 2010 12:30:11 PM	1220.200 PSIA
92	Nov 17, 2010 12:35:11 PM	1229.600 PSIA
93	Nov 17, 2010 12:40:11 PM	1231.400 PSIA
94	Nov 17, 2010 12:45:11 PM	1234.000 PSIA
95	Nov 17, 2010 12:50:11 PM	1235.400 PSIA
96	Nov 17, 2010 12:55:11 PM	1235.000 PSIA
97	Nov 17, 2010 01:00:19 PM	1235.600 PSIA
98		
	Nov 17, 2010 01:05:12 PM	1238.000 PSIA
99	Nov 17, 2010 01:10:12 PM	1238.800 PSIA
100	Nov 17, 2010 01:15:11 PM	1241.800 PSIA
101	Nov 17, 2010 01:20:12 PM	1242.000 PSIA
102	Nov 17, 2010 01:25:11 PM	1242.600 PSIA
103	Nov 17, 2010 01:30:11 PM	1242.000 PSIA
104	Nov 17, 2010 01:35:11 PM	1256.400 PSIA
105	Nov 17, 2010 01:40:11 PM	1256.400 PSIA
106	Nov 17, 2010 01:45:17 PM	1256.800 PSIA
107	Nov 17, 2010 01:50:13 PM	1258.200 PSIA
108	Nov 17, 2010 01:55:11 PM	1258.800 PSIA
109	Nov 17, 2010 02:00:11 PM	1261.200 PSIA
110	Nov 17, 2010 02:05:11 PM	1264.000 PSIA
111	Nov 17, 2010 02:10:11 PM	1263.000 PSIA
112	Nov 17, 2010 02:15:11 PM	1264.000 PSIA
113	Nov 17, 2010 02:20:11 PM	1266.000 PSIA
114	Nov 17, 2010 02:25:11 PM	1264.400 PSIA
115	Nov 17, 2010 02:30:11 PM	1266.200 PSIA
116	Nov 17, 2010 02:35:11 PM	
117	Nov 17, 2010 02:40:11 PM	1273.200 PSIA
118	Nov 17, 2010 02:45:11 PM	1273.600 PSIA
119	Nov 17, 2010 02:50:11 PM	1273.400 PSIA
120	Nov 17, 2010 02:55:11 PM	1275.400 PSIA
121	Nov 17, 2010 03:00:11 PM	1276.600 PSIA
122	Nov 17, 2010 03:05:11 PM	1276.600 PSIA
123	Nov 17, 2010 03:10:11 PM	1275.600 PSIA
124	Nov 17, 2010 03:15:11 PM	1274.600 PSIA
125	Nov 17, 2010 03:20:11 PM	
		1275.600 PSIA
126	Nov 17, 2010 03:25:11 PM	1274.400 PSIA
127	Nov 17, 2010 03:30:11 PM	1274.600 PSIA



Report.Name: Report Date: File Name:

Title:

Device: Hardware Revision:

Serial Number: Device ID: Data Start Date: Data End Date: Reading Rate:

Readings: Last Calibration Date: Next Calibration Date: PrTemp1000 Data Table

Nov 18, 2010 09:13:40 AM MST C:\Program Files\PTC® Instruments 2.00\Federal 1-13-9-17 ISIP (11-17-10).csv Federal 1-13-9-17 ISIP (11-17-10)

PrTemp1000 - Temperature and Pressure Recorder

REV2C (64K) M75866

PrTemp Nov 17, 2010 03:30:22 PM MST Nov 17, 2010 04:00:22 PM MST

2 Seconds 1 to 31 of 31 May 22, 2009 May 22, 2010

Reading	Date and Time (MST)	Absolute Pressure	Annotation
1	Nov 17, 2010 03:30:22 PM	1271.400 PSIA	
2	Nov 17, 2010 03:31:22 PM	1208.800 PSIA	
3	Nov 17, 2010 03:32:21 PM	1199.800 PSIA	
4	Nov 17, 2010 03:33:22 PM	1193.000 PSIA	
5	Nov 17, 2010 03:34:22 PM	1187.000 PSIA	
6	Nov 17, 2010 03:35:21 PM	1182.400 PSIA	
7	Nov 17, 2010 03:36:22 PM	1177.600 PSIA	
8	Nov 17, 2010 03:37:22 PM	1173.600 PSIA	
9	Nov 17, 2010 03:38:22 PM	1169.400 PSIA	
10	Nov 17, 2010 03:39:22 PM	1166.600 PSIA	
11	Nov 17, 2010 03:40:22 PM	1163.000 PSIA	
12	Nov 17, 2010 03:41:22 PM	1159.400 PSIA	
13	Nov 17, 2010 03:42:22 PM	1157.000 PSIA	
14	Nov 17, 2010 03:43:22 PM	1154.400 PSIA	
15	Nov 17, 2010 03:44:22 PM	1151.200 PSIA	
16	Nov 17, 2010 03:45:21 PM	1148.600 PSIA	
17	Nov 17, 2010 03:46:22 PM	1146.600 PSIA	
18	Nov 17, 2010 03:47:22 PM	1143.800 PSIA	
19	Nov 17, 2010 03:48:21 PM	1142.000 PSIA	
20	Nov 17, 2010 03:49:22 PM	1139.400 PSIA	
21	Nov 17, 2010 03:50:22 PM	1137.200 PSIA	
22	Nov 17, 2010 03:51:21 PM	1135.200 PSIA	
23	Nov 17, 2010 03:52:22 PM	1132.600 PSIA	
24	Nov 17, 2010 03:53:22 PM	1130.600 PSIA	
25	Nov 17, 2010 03:54:22 PM	1128.400 PSIA	
26	Nov 17, 2010 03:55:22 PM	1127.000 PSIA	
27	Nov 17, 2010 03:56:22 PM	1125.200 PSIA	
28	Nov 17, 2010 03:57:22 PM	1123.200 PSIA	
29	Nov 17, 2010 03:58:21 PM	1121.000 PSIA	
30	Nov 17, 2010 03:59:22 PM	1119.200 PSIA	
31	Nov 17, 2010 04:00:22 PM	1118.000 PSIA	

### Federal 1-13-9-17 Rate Sheet (1-13-10)

C4 # 1	Time:	5:35	5:40	5:45	5:50	5:55	6:00
Step # 1	Rate:	200.5	200.5	200.5	200.5	200.4	200.4
	<u></u>	<del></del>					
	Time:	6:05	6:10	6:15	6:20	6:25	6:30
	Rate:	200.4	200.4	200.3	200.3	200.3	200.2
				·			
Step # 2	Time:	6:35	6:40	6:45	6:50	6:55	7:00
Step # 2	Rate:	400.5	400.5	400.4	400.4	400.4	400.3
	Time:	7:05	7:10	7:15	7:20	7:25	7:30
	Rate:	400.3	400.3	400.3	400.2	400.2	400.2
Step # 3	Time:	7:35	7:40	7:45	7:50	7:55	8:00
<b>.</b>	Rate:	600.4	600.4	600.4	600.3	600.3	600.3
	Time:	8:05	8:10	8:15	8:20	8:25	8:30
	Rate:	600.3	600.2	600.2	600.2	600.2	600.1
	Time:	8:35	0-40	0.45	0.50	0.55	0.00
Step # 4	Rate:	800.7	8:40 800.7	8:45 800.7	8:50 800.7	8:55 800.6	9:00
	itale.				- 800.7	000.0	800.6
	Time:	9:05	9:10	9:15	9:20	9:25	9:30
	Rate:	800.5	800.5	800.5	800.5	800.5	800.4
C. ". T	Time:	9:35	9:40	9:45	9:50	9:55	10:00
Step # 5	Rate:	1000.3	1000.3	1000.3	1000.2	1000.2	1000.2
	Time:	10:05	10:10	10:15	10:20	10:25	10:30
	Rate:	1000.2	1000.2	1000.2	1000.1	1000.1	1000.1
Step # 6	Time:	10:35	10:40	10:45	10:50	10:55	11:00
1	Rate:	1200.5	1200.5	1200.4	1200.4	1200.4	1200.3
	Time:	11:05	11:10	11:15	11:20	11:25	11:30
	Rate:	1200.3	1200.3	1200.3	1200.2	1200.2	1200.2
	Time:	11:35	11:40	11.15	11:50	11.55	40.00
Step # 7	Rate:	1400.6	1400.6	11:45 1400.6	1400.6	11:55 1400.6	12:00
	ivate.	1400.0		1400.0	1400.0	1400.6	1400.4
	Time:	12:05	12:10	12:15	12:20	12:25	12:30
	Rate:	1400.4	1400.4	1400.4	1400.3	1400.3	1400.3
		.,		. 100.1		1 100.0	- ,700.5
0. "0	Time:	12:35	12:40	12:45	12:50	12:55	1:00
Step # 8	Rate:	1600.7	1600.7	1600.6	1600.5	1600.6	1600.5
	h						
	Time:	1:05	1:10	1:15	1:20	1:25	1:30
	Rate:	1600.5	1600.4	1600.4	1600.3	1600.3	1600.3

Step # 9	Time: Rate:	1:35 1800.4	1:40 1800.4	1:45 1800.4	1:50	1:55	2:00
	Time: Rate:	2:05 1800.3	2:10 1800.2	2:15 1800.2	2:20	2:25 1800.1	2:30 1800.1
Step # 10	Time: Rate:	2:35 2000.5	2:40	2:45	2:50 2000.5	2:55	3:00
	Time: Rate:	3:05 2000.4	3:10 2000.4	3:15 2000.3	3:20	<u>3:25</u> 2000.3	3:30

Sundry Number: 48679 API Well Number: 43047357040000

	STATE OF UTAH		FORM 9
ı	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MINI	· <del>-</del>	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-39713
SUNDR	Y NOTICES AND REPORTS C	N WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	posals to drill new wells, significantly d reenter plugged wells, or to drill horizon n for such proposals.		7.UNIT or CA AGREEMENT NAME: GMBU (GRRV)
1. TYPE OF WELL Water Injection Well			8. WELL NAME and NUMBER: FEDERAL 1-13-9-17
2. NAME OF OPERATOR: NEWFIELD PRODUCTION CO	DMPANY		<b>9. API NUMBER:</b> 43047357040000
3. ADDRESS OF OPERATOR: Rt 3 Box 3630 , Myton, UT		PHONE NUMBER: Ext	9. FIELD and POOL or WILDCAT: 8 MILE FLAT NORTH
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0660 FNL 0660 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: NENE Section: 1	IIP, RANGE, MERIDIAN: 3 Township: 09.0S Range: 17.0E Meridia	an: S	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDICATE	NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
Approximate date work will start.	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN [	FRACTURE TREAT	NEW CONSTRUCTION
3/3/2014	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
		RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
SPUD REPORT Date of Spud:	PRODUCTION START OR RESUME	_	
	☐ REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
DRILLING REPORT	L TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
	WILDCAT WELL DETERMINATION	OTHER	OTHER: 5 YR MIT
5 YR MIT perforr casing was pressur no pressure loss. pressure was 1	completed operations. Clearly show all ned on the above listed well. ed up to 1432 psig and chart The well was not injecting du 080 psig during the test. Ther vailable to witness the test. E	On 03/03/2014 the ed for 30 minutes with ring the test. The tbg e was not an EPA	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY March 11, 2014
NAME (PLEASE PRINT) Lucy Chavez-Naupoto	<b>PHONE NUMBE</b> 435 646-4874	R TITLE Water Services Technician	
SIGNATURE N/A		DATE 3/11/2014	

Sundry Number: 48679 API Well Number: 43047357040000

# Mechanical Integrity Test Casing or Annulus Pressure Mechanical Integrity Test

U.S. Environmental Protection Agency Underground Injection Control Program 999 18th Street, Suite 500 Denver, CO 80202-2466

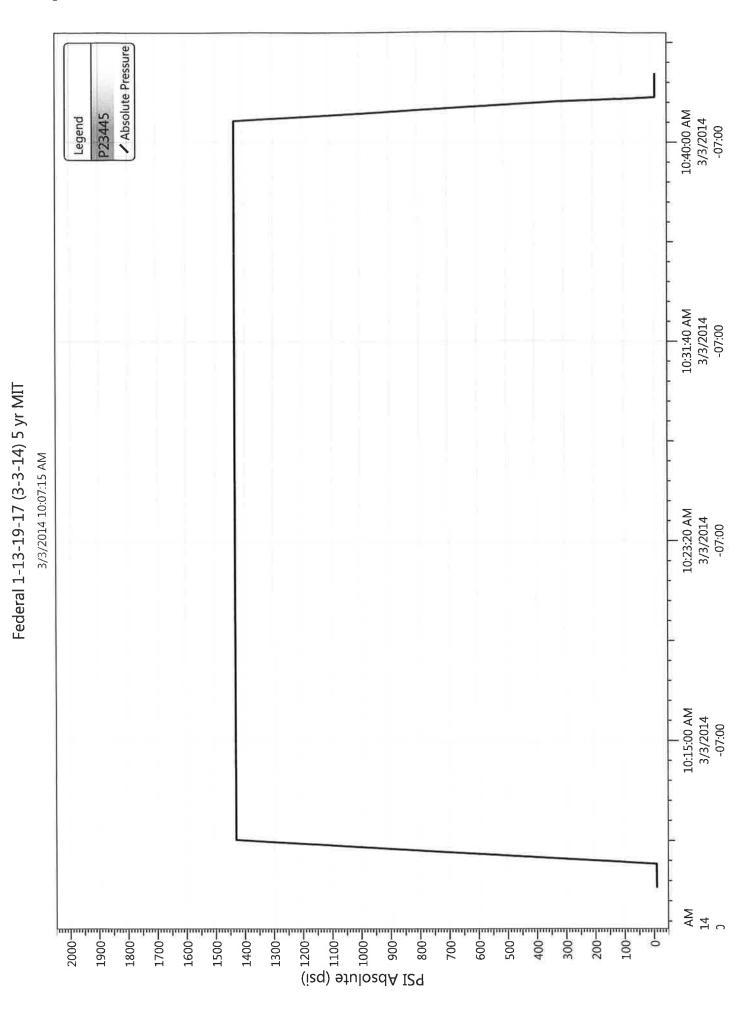
EPA Witness:  Test conducted by:  Others present:	Hary.	SUM	Date: 3/3	
Field: GREATER MON	DHENT BUTH	RATON (	Type: ER SWD State  E/W County: UNTAN  able Pressure:	2/
Is this a regularly scheduled Initial test for permit? Test after well rework? Well injecting during test? Pre-test casing/tubing annuly		Yes [X Yes [X Yes [	No No No If Yes, rate: psig	<b>₽</b> bpd
MIT DATA TABLE	Test #1		Test #2	Test #3
TUBING	PRESSURE	-		
Initial Pressure	1080	psig	psig	psig
End of test pressure	1050	psig	psig	psig
CASING / TUBING	ANNULUS		PRESSURE	
0 minutes	1430	psig	psig	psig
5 minutes	1431	psig	psig	psig
10 minutes	1432	psig	psig	psig
15 minutes	1432	psig	psig	psig
20 minutes	1432	psig	psig	psig
25 minutes	1432	psig	psig	psig
30 minutes	1832	psig	psig	psig
minutes		psig	psig	psig
minutes		psig	psig	psig
RESULT	Pass	[ ]Fail	Pass   Fail	Pass   Fail
				The season

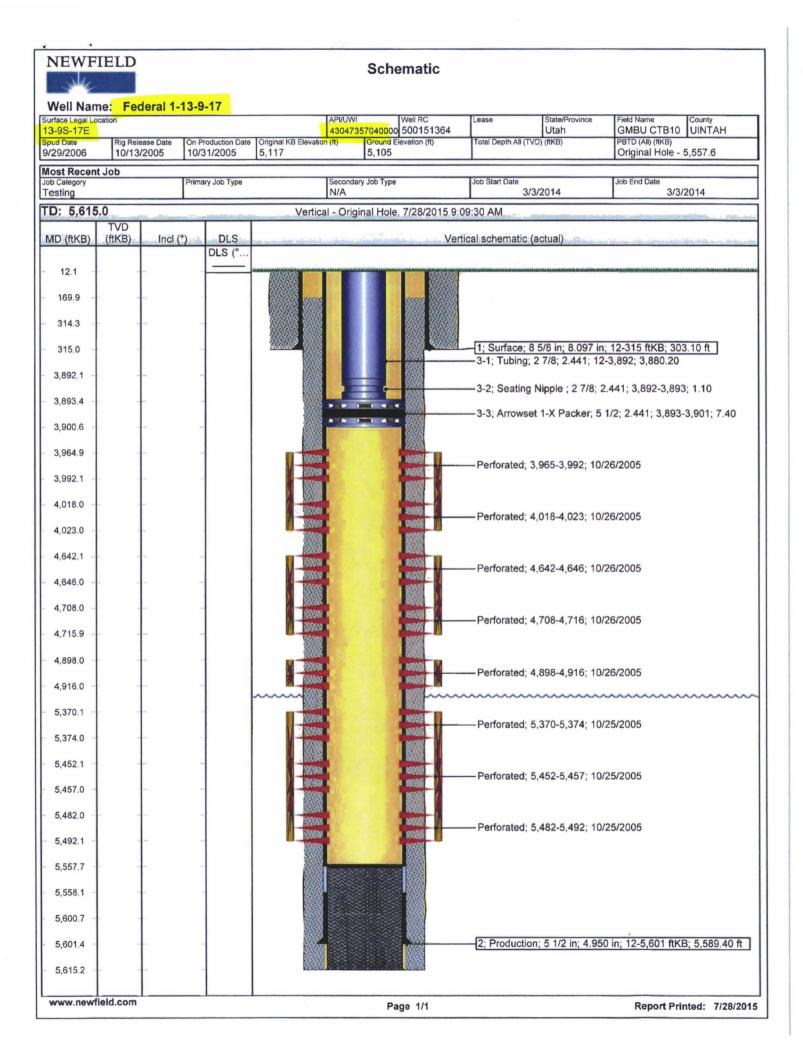
Does the annulus pressure build back up after the test? [ ] Yes [ ] No MECHANICAL INTEGRITY PRESSURE TEST

Additional comments for mechanical integrity pressure test, such as volume of fluid added to annulus and bled back at end of test, reason for failing test (casing head leak, tubing leak, other), etc.:

Signature of Witness:	

Sundry Number: 48679 API Well Number: 43047357040000







#### Newfield Wellbore Diagram Data Federal 1-13-9-17

Surface Legal Location 13-9S-17E						API/UWI 43047357040000		Lease	
County	I			Basin		Field Name			
UINTAH Well Start Date			Utah Spud Date F		Final Rig Release Date		GMBU CTB10 On Production Date		
9/29/2005		9/29/2006		10/13		10/31/2005			
Original KB Elevation (ft) Ground Elevation (ft) 5,117 5,105		Total Depth (ft)	KB)	5,615.0	Total Depth All (TVD) (ftKB)	)	PBTD (All) (ftKB) Original Hole - 5,557.6		
Casing Strings	L		······································				·····		
	Des		Run D	ate	OD (in)	ID (in)	Wt/Len (lb/ft)	Grade	Set Depth (ftKB)
Surface			9/29/2005		8 5/8	8.097	24.00		315
Production			10/13/2005		5 1/2	4.950	15.50	J-55	5,601
Cement									
String: Surface, 31	5ftKB 10/4/2	2005				E 5 11 (0)(5)	5	T- 5	
Cementing Company BJ Services Compa	nv					Top Depth (ftKB) 12.0	Bottom Depth (ftKB) 315.1	Full Return?	Vol Cement Ret (bbl)
Fluid Description					4.47	Fluid Type	Amount (sacks)	Class	Estimated Top (ftKB)
Class "G" w/ 2% CaCL2 + 1/4#/sk Cello-Flake mixed @ 15.8 ppg 1.17 cf/sk vield					ppg 1.17 ct/sk	Lead	160	G	12.0
String: Production	. 5.601ftKB	10/13/20	005	······		<u> </u>		L	L
Cementing Company				- <del>,</del> ,	<u> </u>	Top Depth (ftKB)	Bottom Depth (ftKB)	Full Return?	Vol Cement Ret (bbl)
BJ Services Compa Fluid Description	ny					170.0	5,615.0 Amount (sacks)	Class	Estimated Top (ftKB)
Premlite II w/ 10% g	el + 3 % KCI	L, 3#'s /s	sk CSE + 2	# sk/kolse	al + 1/4#'s/sk	Lead		PL II	170.0
Cello Flake	At 10 40 offal	uiold							
mixed @ 11.0 ppg V Fluid Description	/V / 3.43 CI/SK	yieia				Fluid Type	Amount (sacks)	Class	Estimated Top (ftKB)
50/50 poz W/ 2% Gel + 3% KCL, .5%EC1,1/4# sk C.F. 2% gel. 3% SM mixed					l. 3% SM mixed	Tail	450	50/50 Poz	3,000.0
@ 14.4 ppg W/ 1.24	YLD							<u> </u>	L.
Tubing Strings Tubing Description						Run Date		Set Depth (ftKB)	
Tubing							/2009	<u></u>	3,900.7
Item Des Tubing		Jts 121	OD (in) 2 7/8	ID (in) 2.441	Wt (lb/ft) 6.50	Grade	Len (ft) 3,880.20	Top (ftKB) 12.0	8tm (ftKB) 3,892.2
Seating Nipple		'2'	2 7/8	2.441	0.50	3-33	1.10	3,892.2	3,893.3
Arrowset 1-X Packe	r	1	5 1/2	2.441			7.40	3,893.3	3,900.7
Rod Strings	<u> </u>	X						1	1 3,000
Rod Description	· · · · · · · · · · · · · · · · · · ·			• • • • • • • • • • • • • • • • • • • •		Run Dale		Set Depth (ftKB)	· · · · · · · · · · · · · · · · · · ·
Item Des		Jts	OD (	in)	Wt (lb/ft)	Grade	Len (ft)	Top (ftKB)	Blm (ftKB)
Perforation Interva					<u> </u>				
Stage# 4 GB6, Orig	Zone Zone		Top (ft	KB) 3,965	Burn (ftKB) 3,992	Shot Dens (shots/ft)	Phasing (*)	Nom Hole Dia (in)	Date 10/26/2005
4 GB6, Orig		1		4,018	4,023	4			10/26/2005
3 C, Origina	=			4,642	4,646	4			10/26/2005
3 B.5, Origi		:		4,708	4,716	4	÷		10/26/2005
2 A1, Origin		1		4,898	4,916	4		·	10/26/2005
1 CP2, Orig	jinal Hole	I		5,370	5,374	4			10/25/2005
1 CP3, Orig	jinal Hole			5,452	5,457	4			10/25/2005
1 CP4, Orig				5,482	5,492	4			10/25/2005
Stimulations & Tre	ISIP (ps	3) 1,250	Frac Gradie	nt (psi/ft) 0.66	Max Rate (bbl/min) 25.8	Max PSI (psi) 1,360	Total Clean Vol (bbl)	Total Slurry Vol (bbl)	Vol Recov (bbi)
Stage#	1	.,		0.87	25.5	2,020			
Stage# 1		2,120				2,835		· ·	
		2,120 2,320		0.93	25.3	2,000			
Stage# 1 2				0.93 0.89	25.3 25.4	1,900			
Stage# 1 2 3		2,320 1,820				I .			
Stage#  1  2  3  4  Proppant	Total Prop Vol	2,320 1,820				1,900	d Amount		
Stage# 1 2 3 4		2,320 1,820 Pumped	Proppant E	0.89	25.4	1,900	d Amount		
Stage# 1 2 3 4 Proppant Stage# 1 2	Total Prop Vol	2,320 1,820 Pumped	Proppant E Proppant E	0.89 Bulk Sand	25.4 60560 lbs	1,900	d Amount		
Stage# 1 2 3 4 Proppant Stage# 1	Total Prop Vol	2,320 1,820 Pumped	Proppant E Proppant E	0.89 Bulk Sand Bulk Sand Bulk Sand	25.4 60560 lbs 60560 lbs 65266 lbs	1,900	d Amount		<u> </u>
Stage# 1 2 3 4 Proppant Stage# 1 2	Total Prop Vol	2,320 1,820 Pumped	Proppant E Proppant E	0.89 Bulk Sand Bulk Sand Bulk Sand	25.4 60560 lbs 60560 lbs	1,900	d Amount		